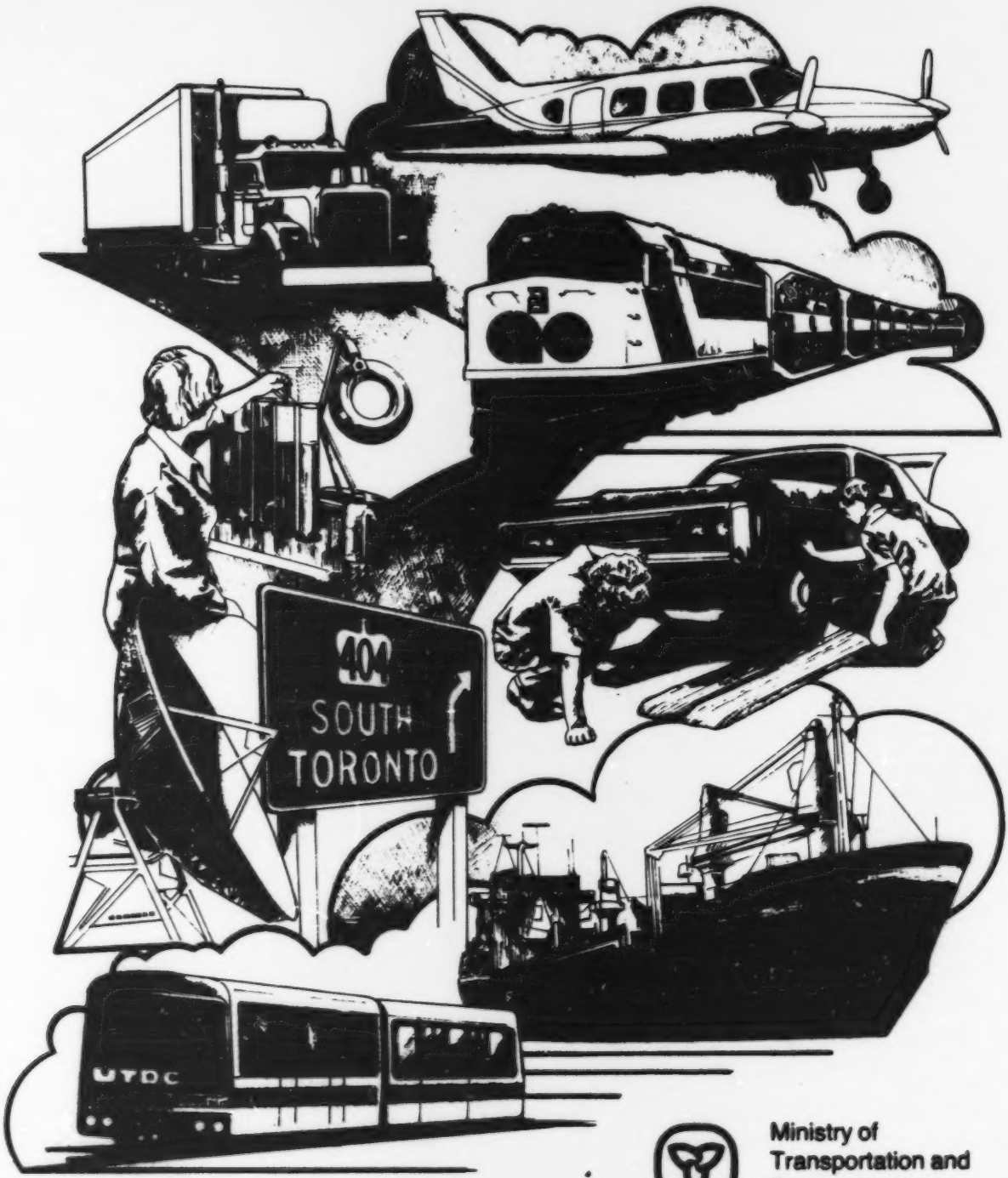
annual report 1981 - 1982



Ontario

Ministry of
Transportation and
Communications

Annual Report 1981-1982

for the
fiscal year
ending
March 31, 1982

Ministry of
Transportation and
Communications

To: The Honourable John B. Aird,
O.C., Q.C., L.L.D.
Lieutenant-Governor of the Province of Ontario

MAY IT PLEASE YOUR HONOUR:
The undersigned takes pleasure in laying before you the Annual Report for the Ministry of Transportation and Communications for the fiscal year ending March 31, 1982.

Respectfully submitted,

James Snow
Minister

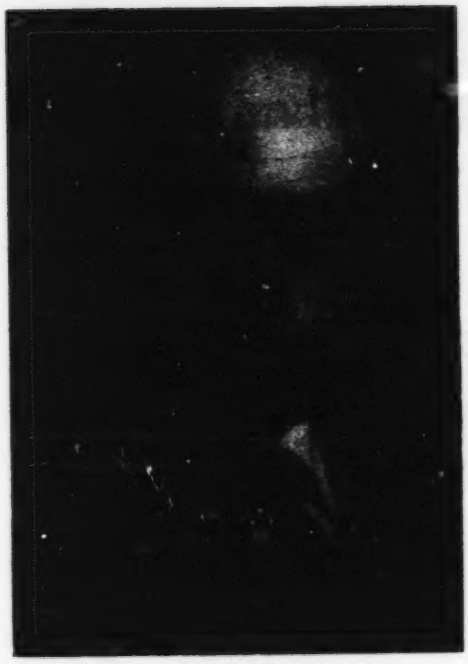
To: The Honourable James Snow
Minister of
Transportation and Communications

Sir:

I have the honour to present the report of the activities of the Ministry of Transportation and Communications for the fiscal year ending March 31, 1982.

Respectfully submitted,

Harold Gilbert



Harold Gilbert
Deputy Minister

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Grading on Highway 403 west of Toronto

MTC continued to provide adequate levels of transportation and communications services in the wake of a major economic downturn during the fiscal year.

A continuing injection of funds from the Board of Industrial Leadership and Development (BILD) helped to maintain, even push forward programs in a number of areas.

Highways

The highway program maintained a high profile in 1981-82 with an overall expenditure of $490,500,000. And an additional $237,000,000 was allocated to subsidize municipal provincial road construction.

In total, MTC constructed or rehabilitated some 741 km of the provincial highway system, primarily on two-lane highways. This work also included construction of 56 bridges. Work on multi-laned divided highways totalled 167 km.

Of the total highway expenditure, $148,676,067 was spent on maintenance of the King's Highway network.

BILD funding spurred freeway arterial construction in southern Ontario's golden Horseshoe, including design work on proposed Highway 403, Brantford to Woodstock; award of the first contract for work preliminary to twinning of the Burlington Bay Skyway, and work on Highway 406 at St. Catharines.

Two highlights included renaming of 100 km of Highway 17 between Thunder Bay and Nipigon, the Terry Fox Courage Highway, and . . . initial installation of a new interchange numbering system on Ontario freeways which matches the number of an interchange to kilometres travelled.

Transportation Programs

Public transit retained a high program profile during the year and MTC continued to provide transit subsidies to Ontario municipalities, totalling $86,124,000 against operations and $82,823,000 in capital assistance.

During the year, the province stated it would provide commuter rail service to the Bradford and Stouffville areas after federal authorities announced withdrawal of Via Rail Service on three rail corridors serving Metro Toronto. Work also continued on expansion of GO Transit rail service to Streetsville and Milton.

MTC introduced a capital subsidy rate of 90 per cent to encourage substitution of electric trolley buses for conventional diesel buses, in support of Ontario's reduced energy consumption objectives.

Promotion of the computerized "Telerider" bus systems continued with demonstrations in Ottawa, Toronto, Kitchener and Guelph, providing for automatic telephone information on bus schedules.

Work continued, too, on the articulated bus demonstration program, with the first vehicle delivered to Mississauga Transit — one of 53 on order for various transit authorities.

In addition, several related initiatives were undertaken to improve transportation services for the physically disabled, including training guidelines for drivers of specialized vehicles, plus safety regulations for these vehicles. MTC's municipal transportation subsidy for the physically disabled totalled $4,628,000.

Air services

MTC's air office carefully monitored the extent and quality of commercial passenger services offered in Ontario during the year, responding to 22 air carrier licence applications made to the Canadian Transport Commission (CTC).

One of the most significant responses to a policy issue was a reply made to Transport Canada on its "Proposed Domestic Air Carrier Policy."

Supplemented by $5,000,000 in

BILD funds, subsidies were made available to some 44 municipalities in northern and southern Ontario for construction, operation and maintenance of municipal airports.

In northern Ontario, one remote airport was under construction during the year at Kasabonika. Eighteen remote airports haved been built over the past 14 years.

MTC staff also assisted the Ministry of Health in implementing a system of medical emergency heliports at selected Ontario hospitals.

Marine Services

During 1981-82, MTC staff drafted the government's response to the Great Lakes/Seaway Task Force report for the minister. Subsequently, programs were initiated based on priorities identified in the report.

These included support for short term improvements on the Welland Canal; creation of an advisory council on marine issues; development of an Ontario ports policy; and a public awareness program for the seaway system.

In conjunction with the BILD program, MTC also announced a feasibility study subsidy to determine the need for harbour development in the vicinity of the Bruce Energy Centre.

Studies to determine requirements for improvements at Oshawa Harbour were underway, also as part of BILD, and negotiations with industry and federal authorities relating to assistance for Ontario shipyards took place.

Rail Services

MTC represented Ontario's interests in all rail-related activities, including tabling the final report of the Ontario Task Force on Provincial Rail Policy.

Staff was involved in passenger issues such as the North East Ontario Passenger Study, the Toronto-to-New York City passenger service, and investigation of implications arising from VIA Rail cutbacks.

MTC personnel also represented Ontario at CTC public hearings on abandonment of a number of branch lines. In addition, they completed the Mid-Western Ontario/Bruce Rationalization Study.

The possibility of building intermodal passenger terminals in the province was also investigated, with a pilot study initiated in Windsor.

Energy

MTC's energy conservation programs continued to play an important role in overall ministry operations; and the Transportation Energy Management Program (TEMP) continued with a number of initiatives.

Research continued into the use of alternative fuels as replacements for petroleum-based fuels; and such alternatives as propane and compressed natural gas were promoted for industrial and private use. During the year, the minister accepted delivery of the first propane-powered car to roll off Ford's assembly line at Oakville.

Under the guidance of an advisory committee comprising members from the trucking industry, MTC's Trucksave program produced and distributed printed and a/v fuel conservation materials. DriveSave, aimed at the driving public, held fuel economy clinics in Kitchener and Toronto as well as producing information materials.

MTC staff continued to assist industry to establish van and car pool programs, while the ride-sharing concept was promoted in exhibitions around the province. As well, work continued to promote teleconferencing as an alternative to travel.

Trucks and Buses

A truck transportation office replaced the highway carrier co-ordination office, with responsibility for developing economic policies related to the trucking industry, transportation pricing, a small business consultative program, liaison with the industry and a newsletter.

A new bus transportation office was also established to develop programs, policies and legislation relating to intercity bus transportation. Staff acted as secretariat to the PCV Act Review Committee and liaison with other provincial and federal authorities.

Legislation and regulations affecting the truck and bus industry, included passage of an act dealing with transportation of "dangerous goods" and standards for load security tie-downs for trucks.

Regulatory changes in the Public Commercial Vehicles Act included removal of duplication of administrative procedures for milk transporters; permission for PCV-licensed carriers to transport bulk fertilizer during the peak season; provision of flexibility for agents of the Wheat Producers Marketing Board in transporting wheat; and exemption of intercorporate trucking from provisions of the PCV Act.

By the end of the fiscal year, the PCV Act Review Committee had completed a seven-month overview of the trucking industry, while the Ontario Commission on Truck Safety set up in October, 1981, continued its investigations through a series of public meetings.

Highway Traffic Act

Amendments to The Highway Traffic Act included allowing either owners or drivers of unsafe vehicles to be charged; prohibited passing on the left shoulders of freeways; prohibited backing up on the roadway or shoulder of any highway divided by a median strip where speed was in excess of 80 km/h.

Amendments made to the regulations under the HTA provided for new safety regulations for vehicles used to transport the physically disabled; new tire standards for trucks, buses and cars; emergency parking on multi-laned highways; a probationary driver licence system; and changes to permit pickup trucks with campers to pay a "personal use" registration fee.

The Motorized Snow Vehicle Act was amended to require drivers to stop when approaching a school bus with flashing red lights, and raise the value of reportable accidents to $400 from $100.

Year end statistics showed another reduction in fatalities on Ontario highways and roads — from 1,508 in 1980 to 1,445 in 1981, representing a drop of 4.2 per cent.

The following is a summary of expenditures reported by the financial comptroller for the fiscal year, 1981-82, with comparative figures for the preceding year.

	Fiscal Year Ending	
	March 31, 1981	March 31, 1982
Ministry Administration	$ 29,800,009	$ 36,357,186
Planning, Research & Development	11,731,838	12,607,880
Safety & Regulation	45,769,268	53,238,593
Provincial Roads	494,295,700	499,448,732
Provincial Transit	66,158,312	81,473,563
Air	4,475,193	4,829,264
Municipal Roads	424,164,066	455,527,976
Municipal Transit	133,768,777	176,867,014
Communications	2,163,206	2,353,816
Total Gross Expenditure	$1,212,326,369	$1,322,704,024

Deputy Minister's Office

Demonstration of laser communications technology

Communications Division

The Communications Division represented the interests of Ontario consumers in telecommunications services while ensuring the full development of telecommunications manufacturing and supply industries. Included in the range of telecommunications services were the mass media of radio, broadcast and cable TV; the common carriers of telecommunications, including residential and business telephone; message; facsimile; telex; private teleprinter services and data communications.

Activities undertaken during the fiscal year included:

- Participated in the Ontario Government's Task Force on Microelectronics with particular responsibility for determining the societal impact of microelectronics.
- Represented the needs of Ontario users — both residential and business — and the telecommunications manufacturing and supply services, before the Canadian Radio-television and Telecommunications Commission (CRTC) on several major issues by intervening in hearings on:
  - application by Bell Canada for an increase in rates;
  - liberalization of terminal attachment, based on its potential to improve consumer choice, encourage innovation by the equipment manufacturing industry and to increase healthy competition within the supply industry.

- **Representations were made to the CRTC concerning:**
  - Canadian content, advancing an incentive-based approach for regulating broadcasters.
- CRTC's decision respecting elimination of restrictions on the marketing of satellite services directly by Telesat and its impact on the Trans Canada Telephone System. The ability of Telesat to directly market its services to end users will increase usage and lead to more innovative applications of satellite technology in Canada.
- Implementation of Phase I of the CRTC extension of service decision, which will benefit Ontario consumers by providing additional broadcast services to underserved communities.
- Radio broadcasting, proposing modifications designed to:
  - encourage AM radio broadcasters to experiment with new technologies;
  - introduce additional positive incentives to ensure Canadian content;
  - eliminate foreground programming requirements on FM, and,
  - allow cable systems greater freedom to exploit the potential of their technology to deliver enhanced services.

- **Ontario's interests were directly placed before the federal government in the matter of:**
  - private microwave licensing policies, setting out objectives designed to ensure universal access to basic telecommunications services, provide innovative cost efficient services, ensure the efficient allocation and assignment of spectrum and ensure equity in access to spectrum resources;
  - pay TV, to increase the choice and diversity of services and Canadian programs available to consumers and provide new sources of revenues and opportunities for investment in Canadian programs. Pay TV has the potential to stimulate the Canadian software and program production industry and strengthen its international competitiveness;
  - earth station licensing policy, which continues to be a key to maximizing the availability of, and consumer access to, diverse

and cost-efficient communications services through satellite technology.

- Ontario presented its argument to the Restrictive Trade Practices Commission concerning the critical issue of whether vertical integration should be allowed in major Canadian telecommunications industries; which Ontario believes improves the competitive environment for telecommunications equipment manufacturers.
- Participated in a major federal review of cultural policy in Canada (Applebaum-Hebert Committee), provided the opportunity of presenting cultural issues that arise in the context of communications policies, including the need to strengthen the Canadian program production industry and to address Canadian content regulations.
- A cable policy paper was formulated to establish a framework for the potential provincial regulation of cable distribution systems operating in Ontario; close liaison was continued with the cable industry and its support for Ontario's position has been very encouraging.
- Participated in the federal-provincial Conference of Ministers of Communications, held in September in Winnipeg, and in associated federal-provincial working groups, including the federal-provincial task force on joint regulatory mechanisms, and bilateral negotiations at the deputy minister level concerning pay TV.
- Continued to promote the use of teleconferencing both within government and the private sector as a means of reducing energy consumption; two ministries, two private industries and an educational institution adopted the teleconferencing approach as a means of saving energy and travel dollars.
- Conducted, together with CN/CP Telecommunications, a successful demonstration of laser technology by transmitting information between Ottawa, the CN Tower and Queen's Park. Laser technology is viewed as a potential valuable tool in highway traffic management and control systems, and for short-haul communications applications.
- Provided technical assistance in the design and assessment of fibre optic communications system for traffic management application, of increasing significance as congestion increased on highways.
- Participated in the direct broadcast satellite project, together with the Ministry of Northern Affairs, the Ministry of Culture and Recreation/ TVOntario and the federal Department of Communications to provide telecommunications service to 46 locations in northern Ontario.
- Representation continued in the government/industry committee (TAPAC) related to terminal attachment interface standards, important from a long-range perspective as it relates to manufacturing standards and protection of the network infrastructure.
- Increased emphasis was placed on improving discussion between government, industry and consumers through participation in several public forums.

Management Improvement Branch

Economic, technological and societal changes affect MTC's ability to provide service. Varying impacts of these changes require management to be flexible and capable of adapting to the new conditions. Branch staff supports the Deputy Minister and his management team in their endeavours to plan, direct and delivery ministry programs to the citizens of the province.

In this support role to the senior executives, branch efforts are directed to identify, recommend, promote and encourage improvements in such diverse areas as: organizational performance; resource utilization; operational effectiveness; systems utilization/application; policy issues.

Specific Projects

- Co-ordination of the implementation of performance budgeting was continued during the year; improvements in reporting activities incorporated and utilization enhanced;
- Municipal Roads office functions were analyzed at head office, regional and district levels. Opportunities to strengthen, streamline and update operations identified and line implementation of recommendations initiatied;
- The branch co-ordinated a review of licensing and control branch operations relative to relocation of production operations to Kingston. Results are being used to plan the restructuring and allocation of resources between the Downsview and Kingston locations;
- Automated information systems development services were examined by a task force directed by staff, including executive concerns, user relations, workload, planning, technological change, training and organizational responsibilities. Insights to similar operations in other organizations were obtained from three other Ontario ministries, and three major private sector corporations. A management consulting firm was utilized to assist the task force to pinpoint major issues and make recommendations. Implementation of action plans will promote automation of manual processes, enhance systems development, methodology and improve ministry productivity and efficiency;
- As a result of an Ontario Government initiative concerning audit practices, staff began a study of the Internal Audit Branch. Audit practice insights were obtained from other Ontario ministries, a major crown corporation and federal government and audit associations. Adoption of comprehensive auditing, strengthening computer systems audits, and transfers of certain responsibilities to line units have been included in this important study;
- At the request of the Deputy Minister, the branch undertook a broad review of human resource services. A task force, strongly supported by personnel branch staff, conducted a comprehensive questionnaire survey of all MTC managment personnel concerning human resource services issues. Contemporary human resources literature was researched, and several external public and private organizations visited. Recommendations have been presented to the ministry's strategic policy committee for consideration.
- Other branch assignments included several organizational studies at head office and the regions. Committee activity by ministry personnel was catalogued, classified and presented to executive management. Operational studies, conducted in conjunction with regional personnel, were started in the areas of purchasing a supply and planning & design.

Scenic Highway 35 near Miners Bay

Highway Program Development Branch

Personnel was responsible for program planning, development, priority setting, expenditure control, monitoring and program evaluation for both the construction and maintenance elements of the Provincial Highway Program.

The Branch has two functional units — highway program planning office and highway program administration.

Highway Program Planning Office

Highway program planning office staff, with supporting sections, plans and co-ordinates future development of the provincial highway program. Functions include annual long-range planning; development of program/sub-program/activity priorities; development of system policy; co-ordination and synthesis of highway planning information; and evaluation of program performance and effectiveness.

Through its manager as co-ordinator of the provincial highways program, the office also provided significant staff support to the assistant deputy minister, Provincial Highways, and the Provincial highways program planning committee.

Long-range planning (LRP) involved analysis issues and demands, so products and services can be properly matched to future requirements. Specifically, the long-range planning process involved a calculated speculation of future program issues, financial outlooks and system needs to determine the program future emphasis.

Last year, the LRP concentrated on the rationalization of program/sub-program objectives, program/activity structure, program options and marketing information. Work was also carried out to review the LRP process to make it effective in providing corporate direction to operational units responsible for program delivery.

Program evaluation assessed the effectiveness of the products and services in terms of measurable public benefits. It provided information on the relative significance of various sub-programs as well as monitoring results through MBR reporting. While MBR is now an established activity in the program, the development of a program evaluation framework and expertise building were the main activities.

Program priority planning carried out analysis and development of broad

Strategic Policy Secretariat

Secretariat staff supports the minister, deputy minister and the Strategic Policy Committee (SPC) in the management of the committee's ongoing business and the development and implementation of improvements to the strategic planning and management process.

During the past year the secretariat has:

- Managed the business of the SPC, the ministry's senior executive committee;
- Maintained liaison with the central agencies of government and other ministries on behalf of the policy committee;
- Co-ordinated the preparation and presentation of outlooks and futures papers by ministry staff to the SPC as the preliminary step in the strategic planning process;
- Organized and managed strategic policy development and planning process, specifically, the establishment of the format content and publication of the ministry's strategic planning guidelines, 1983-1988;
- Assisted the program and resources planning committees in the continuing task of producing long range plans to further implementation of the strategic planning process;
- Co-ordinated ministry responses to briefs and submissions received from associations and the public and to requests for policy-related information from government sources;
- Represented the ministry in the government's exploration of possible freedom of information legislation;
- Assisted in the briefing and escorting of delegations of senior international executives concerned with transportation and communications;
- Organized special meetings between the SPC and outside experts on subjects of particular interest to the ministry; and
- Participated in a government-wide effort, co-ordinated by Management Board Secretariat, to document and display management processes and tools as part of the management standards project.

New Highway 403 Interchange at Ford Drive and QEW

sub-program priorities to obtain the most public benefits for the overall provincial highway program. Priority analysis determined funding to be allocated to each sub-program and activity and identified priority on system improvements and changes to be carried out in each year.

System policy planning staff developed policies and strategies, ensuring the provision of equitable and adequate services on the highway system. The extent and location of system improvements, impacts of level of service changes and variations in quality and quantity standards were analyzed to guide program management decisions.

Information systems function collected, processed and synthesized information to support the overall planning and management of the provincial highways program. In addition to providing significant technical data and other information for internal use, specific information was prepared for use by the public. "Highway Distance Table" and "Traffic Volumes: King's Highway and Secondary Highways" are examples of such widely used information.

Highway Program Administration Office

Highway program administration office staff with supporting sections, carried out overall provincial highway administration including program budget control, operational planning, multi-year workplanning and project control.

Personnel co-ordinated the budgeting process through central allocation of funds between organizational units. In-year expenditures, which in 1981-82 were approximately $510,000,000 were monitored on a continuous basis and reported periodically to senior management.

Through this monitoring and interaction with the ministry's regional organizations, appropriate in-year budget and expenditures adjustments were carried out in response to constraints or initiatives such as the additional funding made available through the Government's Board of Industrial Leadership and Development (BILD).

Using the critical path method (CPM), a number of major highway developments (i.e. QEW at Burlington Bay Crossing) were broken down into individual projects suitable for contract award, at the same time affording maximum public use of available facilities at least overall cost.

CPM construction schedules were developed on approximately 30 individual projects, and provided to contractors as information at the time of tendering. Forty-eight projects were monitored using CPM construction schedules, providing up-to-date information, for use in the management of the ministry's construction budget.

The computerized construction resources evaluation package (CREP) was implemented in all regions and head office relating to construction staffing requirements. The expenditure forecast system (X-FOR) continued to provide a calendarized expenditure flow profile on approximately 1,300 projects, valued at $1.5 billion dollars in the multi-year program.

In order to provide management with the best information possible, relating to the provincial highways program, a number of computer systems were initiated. A more sophisticated expenditures program, program expenditure analysis system (PEAS), will update the current X-FOR system.

The pre-contract engineering project status (PEPS) will update the current method of monitoring the pre-engineering process. The cost of project summary (COPS) system will monitor more accurately the value of a project. In addition, a system will continue to be developed to monitor consultants expenditure within the program.

During the past year, an operational planning and control section was established to develop and implement additional and improved management capabilities and budgeting processes for the entire highways program. These additional requirements were deemed essential for the continued provision of optimum highway service within an increasingly constrained financial environment.

An operational management process was initiated to provide fiscal and human resource-oriented operational guidelines and annual work plan targets for each of the administration, design, construction and maintenance elements. Annual work plans for each of the organizational units will be developed on the basis of this process which will also provide up-to-date information for in-year evaluation and management of activities. To date, an overall framework for an operational management process has been developed and is now being implemented in stages.

MTC's annual display at the C.N.E.

Public & Safety Information Branch

Public and Safety Information staff were responsible for the Ministry's internal and external communications programs, including liaison with the news media.

More than 6,000,000 pieces of safety-related information materials were produced and delivered as requested during the fiscal year, including brochures, booklets and periodicals such as the Driver's Handbook, the Ontario Traffic Safety Bulletin, MTC News and safety curriculum materials for all Ontario public and separate schools.

Over the past 12 months, staff answered over 123,000 telephone requests for up-to-date road information; responded to 125,000 requests for general information and replied by mail to another 1,540 information queries.

Personnel also produced in-house radio and TV commercials, A/V scripts; and display advertising for newspapers and magazines to publicize MTC's programs.

Production of informational traffic safety films by A/V staff continued with completion of a film to promote child restraints: "Life is Precious."

Another film, tentatively titled "The Drivesave Zone" and under production, was designed for high school driver education as well as general public release. Staff also produced MTC's annual "Ontario on the Move" film.

The A/V unit produced 41,000 black-and-white photographs, 50,000 slides and 11 film strips written for the training of MTC staff.

Ninety-six speeches and statements for the minister, deputy minister and other MTC senior staff were researched and drafted. Production of news releases — both general and contract awards — totalled 370.

Other branch responsibilities included official functions and opening ceremonies such as the "Terry Fox Courage Highway" ceremony at Thunder Bay; various displays, including MTC's annual CNE show; and the updating of the "Safety Caravan" sent to fall fairs, winter carnivals and like events.

Affirmative Action Program

The Affirmative Action Program was designed to remove barriers to equality for women employed within the ministry, attempting to overcome past and present discrimination and generally improve their overall status.

Staff acts as a means of providing training, education and support systems for women of all levels.

The office has undertaken several initiatives to assist women and managers in implementing mutually beneficial activities. For example, plans are developed by MTC managers to outline affirmative action commitments for a specified period of time.

Likewise, women at MTC participate in career development interviews which gives them more directed career goals and plans.

Additional activities implemented during the past fiscal year are highlighted below:

- sponsorship of two affirmative action conferences for approximately 60 unit representatives and council members;
- continued co-ordination of a summer student program designed to assist women in office and clerical services positions;
- initiation of 65 short-term developmental training assignments under the accelerated career development program;
- monitoring of 17 job competitions;
- evaluation of representation in various classifications, with targets developed for under-represented areas;
- co-ordination of council and unit representative activities;
- dissemination of information pertinent to women employees.

Provincial/Municipal Transportation

MTC subsidizes municipal airports throughout Ontario

Transportation Programs Division

Transportation programs division staff provided the focal points for the five major travel modes represented by the division's five offices; namely, transit, municipal roads, air, rail and marine and pipeline.

Personnel in each office was responsible for their own planning and participating in intermodal matters affecting their particular areas. They also implement policies and carried out specific modal projects as well as administrating the several financial subsidy programs.

In general, the division's responsibility was to identify Ontario's public interest in each mode, then determine the best courses of action to achieve overall provincial transportation goals.

Where federal jurisdiction was involved, staff presented the provincial position and worked to obtain desired federal participation or policies. This necessitated staff representation before federal regulatory bodies to ensure the provincial viewpoint was included.

Air Office

Air office staff had broad responsibilities for policy and program development in connection with MTC's overall interest in aviation in Ontario. The office maintained liaison with airport operators; commercial air carriers and other interest groups; and with Transport Canada, which is responsible for the licensing and regulation of all aviation activities.

A major function was monitoring the extent and quality of commercial passenger services offered to Ontario municipalities. This involved, in part, an assessment of reach application submitted to the Canadian Transportation Commission (CTC) for new or revised licences for the provision of such services.

In the fiscal year 1981/82, the office responded to 22 specific licence applications and policy issues. The most significant was a reply to Transport Canada on its draft "Proposed Domestic Air Carrier Policy." The Provincial position was presented both to the Ministry of Transport and, subsequently, the standing committee on transport in Ottawa.

Staff were no longer responsible for direct monitoring of the norOntair service (as this is a function of the Ministry of Northern Affairs and the Ontario Northland Transportation Commission); but did provide input into a policy planning study commissioned by MNA, aimed at identifying future norOntair personnel management and operating strategies.

On the program side, personnel developed policies leading to expansion of the municipal airport program to cover the entire geographical area of the province. The subsidy program, supplemented by funds made available through BILD, was made available to 48 municipalities, 44 of whom either had airports in operation or under construction. The office offered guidance to municipalities on the planning, design, and operation of their airports and entered into agreements with them for requested subsidies towards development projects and maintenance expenditures.

Construction and maintenance of MTC airports in remote northern areas of Ontario is the responsibility of the ministry's N.W. Region. Air office responsibilities in this program were the development of policy and standards, preparation of multi-year programs, and monitoring of current programs. The system now includes 18 operating airports. One additional airport was under construction. Capital funding, as for the highway system in northern Ontario, was through MNA.

Special policy issues addressed during the past year, were: the air navigation system in northern Ontario; division of progrm responsibilities between the Federal and Provincial Governments; and others.

Also, revised edition of the Ontario Airport Facilities Map was printed in 1981 and distributed widely to aviation organizations, commercial carriers, and private pilots.

A new responsibility assumed by the office during the past year, at the request of the Ministry of Health, was to assist in the implementation of a system of medical emergency heliports at many hospitals. Actual construction of each heliport was a responsibility of the hospital authority. The Air Office developed standards and provided assistance and guidance relative to site selections and licensing procedures.

Prototype of a new articulated streetcar

Transit Office

Transit Office staff was rsponsible for transit program policy development and evaluation, administration of municipal transit financial assistance programs, development and management of operational improvement and demonstration projects, and carrying out or assisting in planning for municipal and provincial transit system improvements.

In 1981, a total of 66 municipal transit systems received financial assistance in accordance with policy, a policy providing subsidy to cover 50 per cent of the theoretical net cost calculated on the basis of a target revenue/cost (R/C) ratio established for each municipality.

Also an additional subsidy up to a limiting amount was provided to those municipalities falling short of their target R/C ratio.

Municipalities experiencing an above normal population growth also received additional assistance. As well, municipalities introducing a new major facility were eligible to receive a special subsidy for the initial years of operation.

Agreements were developed for such undertakings on an individual basis, incorporating municipal initiatives with respect to co-ordinated land use and transportation policies while detailing the appropriate operating subsidy terms.

Capital funds were also provided to municipalities at the rate of 75 per cent of expenditures.

A program to provide subsidy assistance to municipalities for the provision of transportation for physically disabled persons began in July 1979. The amount of subsidy was based on 50 per cent of capital and operating expenditures.

The provision of financial and technical assistance to municipalities undertaking transit studies was continued. Operational studies of existing and potentially new transit services took place in London, Barrie, Kingston, the Township of Kingston and Sandwich West, Oakville, Timmins and Orillia. In London, the transit review was part of a major urban transportation study scheduled for completion in '82.

Several related initiatives were undertaken to improve transportation services for physically disabled persons, including the development and publication of training guidelines for drivers of specialized services and the implementation of an interim safety regulation for vehicles transporting physically disabled passengers.

Also introduced in 1981 was the mandating of reciprocity enabling registered users in one municipality to arrange for service in other municipalities.

With respect to provincial transit, work was completed on the rationalization and expansion of GO Transit services in the Toronto Region. With the announcement by the Federal Government that three rail passenger corridors serving Metro Toronto would be abandoned in the early fall of 1982, pressure was placed on the province to provide replacement rail service.

In response, the province announced commuter GO rail service would be provided to the Bradford and Stouffville areas.

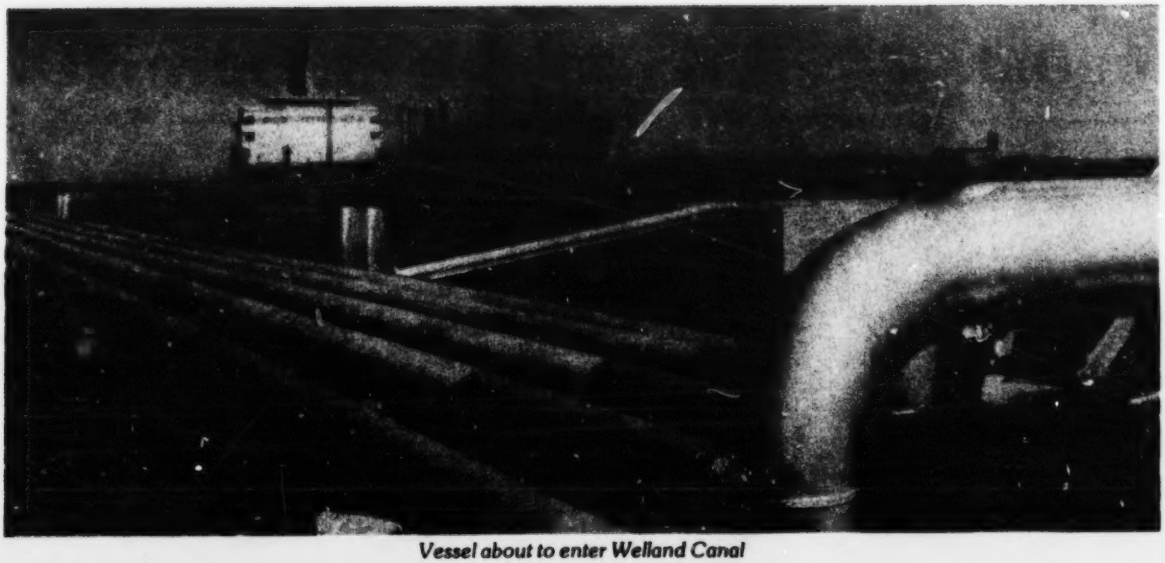
In support of provincial energy objectives, an increased capital subsidy rate (90 per cent) was introduced to encourage the substitution of conventional diesel buses with electric trolley buses. Also, in co-operation with the Ontario Urban Transit Association (OUTA), a comparison of the operating characteristics of trolley and diesel bus fleets was undertaken.

The development of an OUTA fact book was completed and the first public edition summarizing 1981 information was slated for distribution in mid-1982.

The demonstration and implementation of passenger information systems continued to be promoted by staff. These computer-based systems provided automatic telephone information re scheduled bus arrival times, and proved to benefit transit users, resulting in increased ridership. Demonstration systems were installed in Ottawa, Toronto and Kitchener — the latter being a shared operation with Waterloo, Brantford and Guelph.

Work continued on the articulated bus demonstration program during 1981 to culminate with the delivery of 53 coaches to Mississauga, Ottawa, Hamilton and Toronto by the fall of 1982, where operational testing will be carried out for three years.

A project to demonstrate the operational benefits associated with the concept of honour fares in Ottawa was initiated in 1981, with in-service testing and evaluation on both standard and articulated buses planned for late 1982.



Vessel about to enter Welland Canal

Marine & Pipeline Office

The office has been operating in the transportation program division since early 1981 when the Great Lakes/Seaway Task Force activity was completed and the report published.

One of the staff's first priorities was to review the task force report recommendations and submit to senior ministry management and, then to cabinet, the proposed government response. This activity was completed. The minister announced in December the priorities selected from the report and outlined the activities which would result.

The major elements of the cabinet direction included:

- Ontario's support for short-term capacity improvements on the Welland Canal and liaison with the federal government to determine the timetable planned for these improvements;
- Development of an Ontario position on extension of the navigation season;
- Creation of an advisory council to assist in creating Ontario positions on various marine issues;
- Creation of a public awareness program;
- Development of a commercial promotion program for the Great Lakes/Seaway System, and,
- Creation of an Ontaro ports policy.

Specific responses to each of these directions were initiated and detailed programs are being developed.

Close liaison was established with the various areas of the federal government with jurisdiction over the Great Lakes/Seaway System and its components.

Co-ordination of implementation for the marine oriented Board of Industrial Leadership and Development (BILD) also continued, and included:

- Negotiations with industry and the federal government about assistance to Ontario shipyards;
- Announcement of a feasibility study to determine the need for harbour facilities for the Bruce Energy Centre. The study will be jointly financed by the federal government with BILD paying for Ontario's share, and,
- Studies to assist in determining the requirements for improvements at Oshawa harbour which were underway — with some resolution expected later in 1982.

Rail Office

The rail office is responsible for representing Ontario's interests in all rail-related activities, as well as promoting and assisting the development of a suitable provincial rail transportation system.

Two important milestones took place: the tabling in the legislature in April, 1981, of the final report of the Ontario Task Force on Provincial Rail Policy and July 27th federal government announcement of a 20 per cent cutback in VIA Rail's passenger services across Canada.

Office staff were also involved in a number of ongoing programs, including — branch lines, passenger services, regulatory activities, electrification, stations, intermodal developments and safety issues.

Staff represented the provincial government at CTC public hearings studying the potential abandonment of a number of branch lines. The year also saw completion of the Mid-Western Ontario/Bruce Rail Rationalization Study, expected to lead to a more rational and efficient rail network.

One finding of the Bruce Study was that certain abandoned rights-of-way should be retained to facilitate the introduction of rail service if it should be warranted at a future date. Thus, policy was initiated on possible acquisition and/or banking of selected abandoned rights-of-way.

Staff was also involved in such passenger issues as the North East Ontario Passenger Study, the Toronto to New York City passenger service, and investigation of the implications of the VIA Rail cutbacks implemented in November, particularly with respect to the impact of the residents of Northern Ontario.

Passenger services provided by GO Transit and VIA Rail in the Toronto area were reviewed because of Federal Government's decision to remove the Ottawa subsidy for the Toronto- Stouffville/Barrie/Havelock passenger lines.

As a result of the recommendations of the rail policy task force, staff also initiated a rail master plan, and studied in co-operation with GO Transit, the electrification of a portion of GO's Lakeshore line.

A consultant was retained to conduct the planning and design of this project. And personnel represented the province in a federal government electrification committee studying the national requirements for rail electrification.

Ontario was successful in its intervention before the CTC in having the Minaki station building retained and arrangements begun with the Ministry of

The Ministry strongly supports public transit

Northern Affairs, VIA Rail and CN Rail to refurbish it.

Staff also investigated the possibility of building intermodal passenger terminals in the province, with a pilot study now underway in Windsor.

Rail office staff continued to monitor all activities related to rail safety. An outcome of the Mississauga railway accident inquiry was a "show cause hearing on railway safety" (the transportation of dangerous commodities by rail), in which the staff played an influencing role.

As in the previous year, MTC continued to be involved in regulatory matters, many relating to railway regulation and administration, as well as long-term projects requiring continuous monitoring and action.

These included: Review of railway costing order R-6313; uniform classification of accounts; cost of capital study; rate arbitration process; CTC jurisdiction over private sidings; statutory limit of railway liability; registry of non-railway owned rail cars; rail safety issues-transportation of dangerous goods and railroad crossings.

Municipal Roads Office

Municipal roads office staff were responsible for program planning, policy development and evaluation, and the overall administration for all municipal road subsidy programs.

Municipal Roads Programs

During the 1981-82 fiscal year, road grants were provided to 838 municipalities and 45 Indian reserves under the Public Transportation and Highway Improvement Act.

Under special agreement, funds were provided to the regions of Durham and Waterloo, and city of Brantford for the development implementation of computerized traffic signal systems designed to improve traffic flow in support of the province's energy conservation program. In addition, 39 municipalities received subsidy for the installation of traffic signals.

Under the terms of a new agreement, funds were provided for the operation of the Amherst Island ferry service.

The distribution of funds are shown below:

Area	Total Estimated Expenditure	Approved Expenditure	Subsidy Paid
Metro Toronto	721.3	40,926,712.80	19,726,000.00
Regions	6,909.4	119,735,757.00	48,948,813.40
Counties	12,564.6	85,543,073.61	37,144,599.12
Townships (& Islands)			
Police Villages	75,010.3	166,359,088.70	76,482,000.00
Other Municipalities			
Municipalities Combined	33,975.1	371,878,486.91	178,000,000.00
Public Transit		5,346,413.00	5,346,413.00
Development Roads		1,247,948.00	1,247,948.00
Additional Work Roads		481,000.00	481,000.00
Total	129,181.7	790,109,230.00	369,376,774.52

Highway Connecting Link Program

There are 918 km of municipal roads covered by connecting link agreements. MTC funded 119 agreements with a total expenditure of $14,687,000. An additional $1,614,900 was spent on maintenance activities in towns, villages and townships.

Development Road Program

Development road work represents municipal projects which would ordinarily place a financial burden on municipalities. MTC subsidizes these projects under agreements with each municipality up to 100 per cent of the total cost.

These roads remain under the jurisdiction of municipalities with work done either on a day labour basis or by contract. There were 53 projects during the year involving an MTC expenditure of $7,473,300.

Unincorporated Areas

The Ministry contributed $3,990,200 for maintenance and $2,137,600 on road and bridge improvements involving over 100 projects in unincorporated areas. During the year there were 22 statute labour board, 223 local road boards, 30 Indian reserves and 121 other groups which expended funds on roads in these areas.

The Policy Planning and Research Division

Division staff acts as a resource pool for the ministry, providing specialized staff and facilities to help solve operational problems, identify and pursue opportunities in the research and policy fields.

During the year, the division consisted of two major branches — research and development, plus policy planning — and two offices which reported directly to the executive director — social and policy research and the Transportation Energy Management Program (TEMP). It was also responsible for liaison with the Urban Transportation Development Corporation.

Staff was active in co-operative activities with other ministries, municipal authorities, provincial agencies, the federal government, especially Transport Canada.

Personnel also exchanged information at the national and international level, contributing and receiving technical expertise through agencies such as the Roads and Transportation Association of Canada, Transportation Research Board and Organization for Economic Co-operation and Development.

Municipal and Intercity

Staff held regular meetings with the Municipal Transportation Energy Advisory Committee (MTEAC) for discussion and to present results of several computer controlled traffic signal demonstrations. Information on energy conservation was also distributed to 3,000 municipal officials via the MTEAC newsletter, issued quarterly.

In other work, four chapters of the Transportation Energy Analysis Manual (TEAM) were completed and presented to special seminars. Further seminars will be held as successive chapters become available.

Other energy conservation studies completed included alternative work schedules, traffic measures to reduce energy consumption, and preferential treatment for high occupancy vehicles.

Policy Planning Branch

During the year, the branch reorganized to provide staff support to senior management, program areas, and to develop corporate policy related to Government/MTC goals, multi-modal issues and anticipated change in external environment. Five new offices were set up as a result.

Corporate Policy Co-ordination

This office worked to define the needs of senior management and develop appropriate policy options and program activities.

Goods Distribution Systems Program

The first step were taken to establish this office as a centre of information and expertise for the freight industry with the purpose of identifying and pursuing opportunities for improved economy and productivity.

Urban Transportation Program

This office worked to develop a broad overview of current trends and issues to ensure up-to-date policy responses and initiatives. It provided staff support to the Toronto Area Liaison Committee and evaluated major transportation initiatives.

The Research & Development Branch

R&D branch staff conducted physical research to improve the safety, economy and energy efficiency of transportation and communications in Ontario. Most was done in-house, using existing personnel and facilities; but about 40 per cent was assigned to consulting firms in the private sector and universities under the Ontario Joint Transportation and Communications Research Program.

Research was on project basis in resonse to requests from other parts of the ministry, or perceived opportunities for significant improvements. Traditional emphasis on highway and transit system infrastructure continued, but the area of electronics communications and control assumed new importance because of its ability to improve the efficiency of existing systems and high potential for industrial spin-offs.

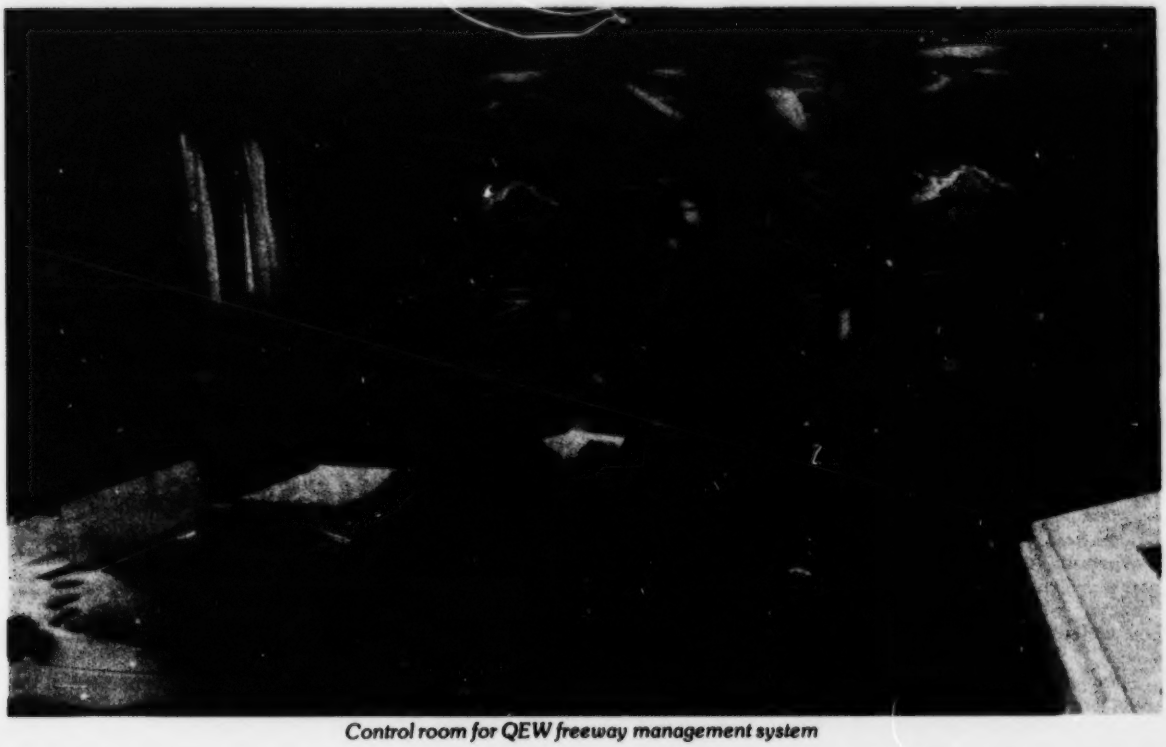
Activities of the various groups within the branch are described below.

Control Systems

This group was involved in advanced electronics technology, developing microprocessor-based traffic light control systems, writing the programs to help traffic travel more smoothly and efficiently through towns and on freeways, and bringing the benefits of innovative technology to bear on practical communications problems.

During 1981, staff completed software design for the expansion of the QEW traffic management system and continued technical support to the 401 Bypass, QEW/403 corridor, and Burlington Skyway projects.

The Municipal Traffic Control System (MTCS) and the SSTOP traffic signal timing projects moved into the implementation stage with installations



Control room for QEW freeway management system

in Brantford, Oshawa, and Kitchener/Waterloo.

Personnel also completed a feasibility study of fibre optics communications for the 401 project and evaluated and demonstrated infra-red laser communications with a link between Queen's Park and the CN Tower and an interconnection with the Telidon information system.

Transport & Vehicle Systems Office

Working closely with the Toronto Transit Commission (TTC), staff developed video monitoring and instrumentation techniques to measure the dynamic behaviour of subway cars.

Testing showed that older, pre-H4 cars were causing excessive track wear and the economic and performance benefits of new suspension designs were established. One new design was built (by Dofasco in Hamilton) and will be subjected to rigorous testing.

At the request of TTC, staff also developed subway car truck suspension design specifications to ensure satisfactory performance in future procurements.

A theoretical (computer) model was developed of the noise and vibration produced by the new TTC/UTDC light rail vehicles. The model was tested against the real thing and proved very reliable, helping future analysis.

A new type of rubber-cushioned streetcar wheel designed by our staff was also tested, as were ring-damped steel wheels to reduce subway squeal.

Staff also worked to promote the introduction of articulated buses in Canada because of their greater efficiency and export potential. The General Motors bus was tested at Huron Park and familiarization sessions held for transit operators.

Other projects included: assistance to the Ministry of Northern Affairs in their study of a cable-towed ferry at Moosonee. And work continued with the Institute for Aerospace Studies (UofT) to develop a sophisticated computer simulation of the actions of drivers and the dynamic behaviour of tractor/trailers in emergency maneuvers.

Automotive Energy

This group worked on the conservation and substitution of petroleum fuels. On behalf of the TEMP program, staff continued detailed testing of propane-powered vehicles and the effects of weather conditions, such as extreme cold, on performances.

Research also started on a project to improve the practicality of compressed natural gas (CNG) as an automotive fuel. The research centres on the search for a suitable storage medium — a chemical substance that will use natural molecular forces rather than extreme pressures to compress enough of the gas into a standard container to give a CNG-powered vehicle a practical operating range.

Other research included testing of methyl-alcohol-based fuels, the effect of winter tires on fuel economy, the fuel-saving potential of block and cab heaters, and assessment of many alleged fuel-saving devices and additives. None of the latter worked better than a good tune-up and a careful driver.

Ergonomics Human Factors Research

Staff studied the interaction of people with machines and their environment in the field of transportation and communications, particularly as they related to highway safety. Projects completed included:

- The effectiveness of driving counsellor interviews and evaluation of a professional development program for counsellors;
- Evaluation of driver education in Ontario schools and development of a draft curriculum;
- A roadside survey of seat belt and child restraint use and a poll of public attitudes towards associated legislation and enforcement;
- Surveys of truckers' compliance with commercial vehicle legislation; the operational efficiencies of truck inspection stations and mobile units.

In March, 1982, this office joined the social and policy research office which reported directly to the executive director.

Materials and Environment Research

Staff here was concerned with the use of materials and their performance in the highway environment. Highlights of the year's activities included:

Concrete

A thorough study of th Papineau Creek Bridge on Highway 62 near Maynooth prior to being paved provided an opportunity to compare several bridge deck deterioration detection techniques.

Methods tested included infra-red thermography, radar scanning, ultrasonics, microseismology, and beating the deck with a chain. Of these, the first two were most promising.

MTC also co-sponsored the first world congress on joints and bearings at Niagara Falls.

When the Appleby Line QEW overpass was demolished, staff took the opportunity to investigate conditions of post-tensioning cables after 25 years of service.

They were found to be in excellent condition — an important finding in view of the number of pre-stressed concrete bridges in Ontario.

In addition, an outdoor exposure plot was constructed at the Brampton patrol yard where the durability of different types of bridge slab repairs were tested by subjecting samples to electrically-induced corrosion.

Techniques and Materials

Investigation into minimizing the use of de-icing salt continued, while on-road test comparisons of sand-salt ratios were carried out.

Studies of asphalt pavements containing sulphur, ground-up rubber tires and ways in which these products could be adapted to normal construction techniques took place.

Heavy snow during the winter provided an opportunity to continue evaluation of new snow fence designs and effects of road-cut slopes on drifting in problem areas, leading to changes in MTC practices and remedial work on roadside embankments.

A major study to investigate on-road and bridge deck drainage was completed at the Canada Centre for Inland Waters at Burlington. Current and proposed sewer inlet designs were tested and design methods developed.

Other work included studies into ways to use geotextiles in the stabilization of embankments over soft subsoils. Completion of a new Ontario shale rating system and associated test methods for evaluating shale-based engineering materials were also developed.

Pavement Research

Many projects were done to further advance the design, maintenance, and rehabilitation of asphalt pavements. They included computer analysis, field measurements, and the development of laboratory test methods to determine elastic moduli values (a measure of strength) and incorporate these values into the computer-based OPAC pavement design system.

The use of plastic mesh reinforcement to strengthen asphalt pavements was investigated in theoretical studies at the University of Waterloo, backed up by tests at Royal Military College, and field trials on Highway 5 near the Guelph line. Results were promising but some problems remain.

The RTAC project to evaluate the weigh-in-motion truck scales developed by the University of Saskatchewan moved into a new phase. The scales are considered to have proven their ability to function in the "hostile" weather and traffic environment of the 401 near Whitby.

During the year, they were removed for refurbishing and improvement and re-installed for new trials as a "sorter" scale — categorizing vehicles in the traffic stream and selecting them for further inspections.

Other projects included the testing of "time domain reflectometry" as a means of electronically measuring the water content of materials, and a co-operative project with Ottawa district to monitor and improve pavement maintenance techniques.

Laying a rubberized asphalt surface

New Credit River Bridge on Highway 403 now under construction

Highway Environment Research

Staff developed a design for noise barrier foundations. They also developed techniques for the acoustic design of the barriers, taking into account such factors as sound transmission loss, sound absorption and reflection.

Staff also worked closely with researchers at the University of Toronto to develop a pavement reflectance matrix photometer — the first instrument of its kind in North America — so the light reflectance properties of pavements (an important factor in illumination design) can be measured in the lab from small core samples.

Other activities included work to develop automated equipment for determination of skid resistance by using stereo-photography of pavement texture. Further refinement of computerized lighting design methods also took place.

Structural Research

Staff continued to work towards a better understanding of the behaviour of bridges and develop means to make them safer and more economical. A major step in this direction was the further development of the Ontario Highway Bridge Design Code.

The first draft of the revised edition went out for public comment in 1981. Developing codes in Australia, New Zealand, and Japan were based on the Ontario model.

Another highlight was the construction of the world's first transversely post-tensioned timber bridge on a logging road near Espanola. By combining modern design techniques with the traditional qualities of wood, it was possible to make the bridge both cheap and remarkably strong.

Two major bridges in Ottawa suspected of being unsound were tested and given a clean bill of health.

Experimental Demonstration and Testing

Staff provided technical and logistical support to project groups within the division, providing technicians, instrumentation, and facilities such as a test track, a chassis dynamometer, and laboratory facilities. Data was collected, recorded, and digitized, then submitted for analysis.

In 1981, the typical workload was about 20 projects at any given time; however, major projects were:

Instrumentation of two Ottawa bridges; participation in on-the-scene investigations of commercial vehicle accidents in the Metro Toronto area; road and dyno testing of methanol as a fuel; survey and assessment of roadside noise barriers; and development of measuring techniques and data recording and analysis of subway wheel noise and vibration.

Technology Transfer

Personnel provided complete publishing services to researchers in the division and the TEMP. The installation of an AES C-20 shared-logic word processor with four terminals brought a major increase in productivity and capability. For the first time, it became possible to type scientific notation with ease and to store equations in magnetic memory.

Successful experiments were also carried out to communicate with other word processors and typesetting computers and to compile and sort bookkeeping information and mailing lists.

Other accomplishments in 1981 included:

Publishing of 47 technical reports, 41 TEMP documents, and about 20 miscellaneous documents such as society papers; streamlined procedures suh as standard formats to speed production; and completion of three films in co-operation with audio/visual services on tunnelling technology, anti-jackknife testing, and fuel-efficiency for truckers.

External Relations

Transportation Energy Management Program

TEMP is a co-operative program with the Ministry of Energy aimed at reducing Ontario's dependence on oil as a transportation fuel in both the private and commercial sectors — by improved conservation, greater efficiency, use of alternative fuels or substitution of the need to travel by improved electronic communications.

During the year emphasis was on promotional and educational activity, but continued research carried out into alternative fuels and computerized traffic control. A summary of other work includes:

Trucksave

Operating under the guidance of an advisory committee composed of volunteer members from the trucking industry, Trucksave produced and distributed large quantities of fuel conservation material. Topics included driving techniques, cooling system tips, aerodynamic devices, and case studies in fuel savings.

Material was also distributed through displays set up in 30 major truck stops; a fee was levied for large orders, out-of-province orders and the Trucksave film, Less Fuel, More profit and the Easy Goin' audio-visual package.

In addition, background for a series of manuals titled Spec'ing a Fuel Efficient Truck and a series of vehicle maintenance was developed.

Drivesave

Staff offered one-day seminars for fleet managers on a weekly basis and distributed a quarterly newsletter. They also advised 30 companies on how to implement fuel economy programs.

In addition, Drivesave clinics were held in Kitchener and Toronto where 1,400 motorists were advised on maintenance and tire pressures. Hundreds of fuel economy calculators were also distributed.

In January of '82, staff participated in filming of a 20-minute fuel economy film for use in driver education classes called the Drivesave Zone. Pre-testing in schools showed a positive response.

Ridesharing

Personnel continued to assist companies establish van and car pool programs, and promote the concept of company sponsorship to major employers.

Ridesharing was also promoted through participation in major exhibitions around Ontario. In addition, staff continued management of a Share-a-Ride program at MTC in Downsview.

Teleconferencing

Work continued to demonstrate the effectiveness of electronic communication as an alternative to travel. Four demonstrations were given to private industry in addition to demonstrations for the Ministries of Revenue, Energy, Northern Affairs and Environment.

New informational materials were also developed including an audio-visual package and new publications to promote the concept.

Alternative Fuels

The objective of this program is promotion of the use of alternative fuels as a replacement for petroleum-based fuels. More than 15,000 propane-powered vehicles are now registered in Ontario.

New technical brochures on propane conversion were produced, but the thrust was directed at consolidating data on vehicle performance.

Other work included research on compressed natural gas, hydrogen, alcohol fuels such as methanol and electric vehicle developments.

Policy Planning Research

Social & Policy Research

This office was established to research social and behavioural impacts of MTC's programs and policies. Additional staff came from ergonomics research and the transportation outlooks office.

Personnel provided consulting services to MTC staff in the fields of survey research, experimental design and statistics. A study for the didemus task force to assess the attitudes and concerns of employees in finance and administration was also carried out.

Demand Forecasting

During the year, staff worked at improving demand forecasting techniques, accumulating and maintaining a large data base of transportation statistics while providing guidance in its use.

Work continued to identify multi-modal and inter-modal opportunities and on applying a "scenario" approach to demand forecasts as input to the GO electrification study.

Inter-City Transportation

Work continued to develop a broad policy framework for inter-city transportation. Emphasis centred on inter-modal flexibility and on analysis of different sectors of the industry.

Transportation Outlooks Office

Staff completed a scanning of 63 professional "futures" volumes and identified 117 indicators — factors which indicated past and future trends. This data was built into a computer data base for forecasting and analysis.

In depth studies of the indicators were commissioned to refine profile development. A presentation of findings was also presented to senior management at their outlooks session. In March, 1982 this office was re-organized to form part of social and policy research.

MTC's "Trucksave" program promotes fuel conservation

Snow ploughing is a vital winter maintenance activity

Responsibility for field operations of various Ministry programs is allocated to five regional and 18 district offices within the regions.

Regional offices are located in Toronto, London, Kingston, North Bay and Thunder Bay.

Northern Region

Construction

Major construction included completion of the four laning of Highway 11, Huntsville northerly and the North Bay Bypass on Highway 11.

Construction was completed on Highways 549, 101, 571, 64 and 65. Clearing was completed for all Detour Lake Rd. construction northeast of Cochrane.

Contracts involving recycled asphalt were completed on Highway 11 at the following areas: Cochrane W'ly; Smooth Rock Falls W'ly; New Liskeard N'ly, and between Highways 112 and 66; on Highways 60, 66, 17, 141 and 69.

Structure work was completed on Highways 35, 652, 539 and Detour Lake Rd., and continued on Highway 572. Construction was also carried out with the 1st and 2nd Detour Lake Rd. grading contracts.

Maintenance

Summer work was carried out on some 3,500 miles (5,635 km) of King's secondary and tertiary highways. Two ferries were operated at Moosonee and Gardiner. In addition to routine maintenance operations, projects for gravelling, priming, surface treating, mulching and asphalt patching were completed.

Winter maintenance took place on most of this mileage, and privatization in the repair area of garage operations was continued.

Municipal

Staff administered various road assistance programs to 132 organized municipalities (one county, two regions, three cities, 35 towns, seven villages, 81 townships, 3 improvement districts), 21 Indian reserves, 112 local roads boards, and 11 statute labour boards, including subsidy, development roads and connecting links in organized areas and special and specific allotments in unincorporated areas.

Engineering & Right-of-Way Office

Personnel completed 28 sets of contract plans and documents for the capital construction program, representing a total value of $62,196.00 in roads and bridge projects. Approximately 85 per cent was done in-house with 15 per cent by consultants.

Staff also carried out property acquisition for the program and continued with legal, engineering and geotechnical field survey operations.

The office completed environmental and corridor control activities and provided input into the ministry's pavement management system.

Drivers & Vehicles

This section, under the direction of the regional office, was divided into two districts located in North Bay and Timmins, serving the districts of Parry Sound and Nipissing; the district municipality of Muskoka; the provisional county of Haliburton; the districts of Timiskaming, Cochrane, Sudbury, Manitoulin Island; the Regional Municipality of Sudbury and the easterly portion of the district of Algoma.

A staff of 73 employees was responsible for the driver examination, motor vehicle licence issuing, driver improvement counselling, vehicle inspection programs and enforcement of The Highway Traffic Act, Public Commercial Vehicles Act, the Public Vehicles Act and the Motor Vehicle Transport Act.

Twenty-five driver examiners and clerical support conducted a total of 33,916 road tests and 44,887 pre-examinations at 9 driver examination centres and 19 travel point locations.

One regional review officer responsible for driver improvement counselling, conducted a total of 1,596 interviews with drivers who had reached the nine demerit-point level and conducted a total of 30 hearings.

Twelve vehicle inspectors conducted 5,327 commercial vehicle inspections, 1,226 school bus inspections, 217 inspections of church school buses, transit buses, "physically disabled passenger vehicles" and highway buses.

They also conducted a total of 1,661 audits and investigations of licensed motor vehicle inspection stations, and

Surveying on the Detour Lake Road northeast of Cochrane

operated portable mini safety inspection lanes throughout the region, which resulted in the inspection of 2,959 light trucks and cars.

A total of 669 vehicles were removed from service for safety-related defects. Audits, investigations and inspection of vehicle inspection stations, commercial vehicles and passenger and light truck vehicles, resulted in a total of 621 charges being laid under the HTA.

Highway carrier inspectors conducted a total of 117,222 inspections at five permanent truck inspection stations, four audit truck inspection stations and eight patrol areas. A total of 6,625 reports of suspected violations were completed, with 4,968 resulting in court action taken.

The motor vehicle licence issuing office staffed by ministry employees in North Bay, conducted 25,543 transactions.

Northwestern Region

Construction

A total of 17 projects were completed last year, including seven contracts on Trans-Canada Highways 11 and 17. Other work involved completion of a contract on Bending Lake Road; including the Seine River Diversion Structure; complete reconstruction on sections of other Kings and secondary highways; construction of three culverts and approaches on secondary highways and one structure rehabilitation project at the Selim Hill CPR overhead.

Eight projects involved the use of recycled hot mix materials.

Contracts were awarded for construction of the final section of Highway 596 leading to Minaki and construction of the final section of Highway 584 north of Geraldton.

Construction of the Kenora Bypass began with completion of a clearing contract and the award of a contract for construction between Highways 17 and 596.

Maintenance

Routine summer and winter maintenance was performed over 5,800 km of King's secondary and tertiary highways. In addition, capital maintenance projects including bridge and culvert repairs, prime and surface treatment projects, maintenance crushed gravel contracts and construction of a new five-bay patrol garage at Sioux Lookout were completed.

Municipal

During the year, 70 municipalities and 11 Indian reserves received regular subsidies amounting to $14,541,700. Staff undertook 10 connecting-link projects at a cost of $1,640,000 and three development road projects totalling $177,000. Some $2,614,800 was provided to 111 local road boards, 11 statute labour boards, 26 Indian reserves (8 in remote north) and other informally organized groups involved with public roads outside MTC's jurisdiction.

Engineering and Right-Of-Way

Office staff completed the pre-contract engineering and property acquisition for 10 highway construction projects which included 22 km of new construction, 74 km of reconstruction and 96 km of resurfacing. In addition, pre-contract engineering work was carried out for 15 day-labour projects covering a total of 90 km of reconstruction.

In addition to carrying out structural planning and design work on the overall highway system, the structural section provided engineering expertise to municipal and/or organized townships within the region on a total of 65 bridges and culverts. Personnel also carried out engineering studies for maintenance programs and program planning purposes.

Drivers and Vehicles

Drivers and Vehicles staff conducted 24,307 pre-examination tests and 14,521 road tests. In addition, 1,992 demerit point interviews and 38 medical hearings were completed.

Vehicle inspection staff conducted 4,695 inspections of commercial motor vehicles resulting in 163 charges. A total of 1,135 buses were inspected and 3,281 motor vehicles were inspected at portable inspection lanes of which 2,738 were found defective.

The highway carrier section inspected 87,223 commercial motor vehicles resulting in 2,756 court convictions.

The regional motor vehicle license issuing office conducted 47,887

Work on the Toronto By-pass section of Highway 401

transactions related to the registration of vehicles.

Remote Airport Program

While 17 airports were maintained, construction was completed at Sachigo Lake and Deer Lake. Administration and control over eight reserve road projects took place.

Central Region

Construction

Construction of Highway 403 from Toronto to Oakville continued with completion of the section from the QEW to Winston Churchill Blvd. Work continued on the section between Winston Churchill Blvd. and Mississauga Rd. and contracts were awarded for the final section between Mississauga Rd. and Highway 10.

Work continued on the widening of Highway 401 east of Toronto with the contract between Oshawa and Bowmanville being completed except for some final lift paving. Work also continued west of Toronto with the resurfacing of Highway 401 between Milton and Campbellville.

The construction of the twin multi-span segmental bridge carrying Highway 406 over Twelve Mile Creek has been virtually completed and work continued on the construction of Highway 406 with work on the local roads and the intersection of the QEW.

Contracts were awarded and work progressed on new arteries such as Highway 404, Highway 427, Black Creek Dr. and Highway 6N in the vicinity of Caledonia.

The multi-year bridge deck rehabilitation program continued with the award of nine contracts.

Engineering and Right-of-Way

Staff prepared a total of 58 projects for contract advertising primarily associated with freeway designs in the Toronto-Hamilton area. Design work continued on major improvements in the Burlington Beach strip area of the QEW and rehabilitation of the Metro Toronto Highway 401 Bypass.

The planning and detailed design of numerous projects on deficient sections of highways in the region were also carried out.

Regional Municipal Office

Staff was responsible for managing the municipal road programs, including overall budget control for the subsidy, King's Highway connecting link and development road programs in Central Region.

This office administered a connecting link program involving 38 projects with a provincial contribution of $4,647,700, including $260,000 for maintenance in towns and villages. the development road program, consisted of two projects involving a provincial expenditure of $77,000.

During the year, 115 municipalities and six Indian reserves received regular subsidies under the Public Transportation and Highway Improvement Act. In addition, 13 municipalities received subsidies under the Traffic Signal Program.

Maintenance

The highway system in Central Region was expanded to a total of approximately 4,929 two-lane kilometres, primarily due to the widening and extension of several freeways.

Hot mix patching in Hamilton and Toronto Districts took place with a total of 22,300 tonnes laid.

The winter of 1981-82 was usually cold and long. In winter maintenance, 263,000 tonnes of sand, and 126,000 tonnes of salt were used to ensure highway safety.

Thirty new signals were installed on highways in response to increased traffic volumes.

On Toronto district freeways, emergency patrols continued to operate, driving approximately 1,060,640 km, while providing assistance to some 30,626 motorists, and dispensing a total of 13,011 Litres of fuel.

Drivers & Vehicles

Staff conducted 293,682 pre-test examinations and 220,927 road tests for driver's licence applicants. As well, 412,919 temporary driver's licences were issued. Driver improvement counsellors conducted 17,644 demerit point interviews, 175 medical hearings and 234 accident repeater interviews. In addition, driver improvement staff conducted 13,561 vision tests and 73 medical waivers.

An annual highway maintenance project

Four licence issuing offices located at Toronto, Oshawa and Hamilton dealt with 556,078 transactions.

Personnel checked 24,773 commercial motor vehicles both at truck inspection stations and carrier terminals. Of these, 2,031 vehicles were removed from service or tagged unfit. A total of 45,470 cars and light trucks were inspected at either permanent or portable lanes and 4,705 vehicles were removed from service. Approximately 3,480 school purposes vehicles and 1,607 commercial buses were also inspected. And 13,153 audits of motor vehicle inspection stations were conducted.

Staff inspected 1,725,408 commercial motor vehicles which resulted in 12,632 court convictions.

Southwestern Region

Construction

Contracts awarded during 1981 included the construction of Highway 402 from Christina St. in Sarnia to the Bluewater Bridge Plaza. It also provided for a new interchange at Front St. and two new structures over the CNR tracks.

A further contract was awarded for construction of two lanes and structures on the E.C. Row Expressway between Highways 3 and 18. When completed, it will provide a direct route through the City of Windsor from Highways 2 in the east to 18 in the west.

Following the completion of a 5.1-mile paving contract awarded earlier in 1981 the Minister officially opened the 11.2 mile section of Highway 402 between Highway 401 and Highway 2 to traffic. A contract for the assumption and reconstruction of former Waterloo Regional Rd. 20 now provides a bypass of the Town of Elmira on Highway 86.

Work also continued on Highway 11 between Orillia and Severn Bridge with the award of a contract for the installation of box beam median barrier and provision for two new interchanges. A contract was awarded for the reconstruction of Highway 27 between Elmvale and Waverley, providing for the construction of northbound and southbound truck-climbing lanes south of the junction of Highways 27 and 93.

Contracts were awarded for reconstruction of Highway 2 through the Town of Tilbury, Highway 77 from Highway 401 southerly, Highway 2 between Woodstock and Eastwood, Highway 7 from Frederick Street easterly, Highway 25 from the junction of Highway 24 northerly and Highway 40 from Wallace westerly.

Resurfacing contracts were awarded on Highway 21 from Thamesville to Dresden — 10.3 km, Highway 59 — 6.1 km, Highway 401 — 16.1 km, Highway 86 — 12.5 km, Highway 6 — from Tobermory southerly 29.8 km and Highway 4 — 16.3 km in the vicinity of Durham and Priceville.

As part of the MTC's preventative maintenance program, perforated pipe subdrains were installed under contract on Highways 402 and 40 for a total of 44.2 km. In addition, a contract for the application of bridge-deck protection was awarded for work to be carried out on three structures on Highways 85 and 7 in Kitchener.

Maintenance

Approximately 4,981 equivalent two-lane kilometres of highway were maintained in Southwestern Region. In addition to routine summer and winter maintenance, 275,000 meters of pavement cracks were sealed under our preventative maintenance program and slope flattening was carried out at 16 locations.

Also, traffic signals were provided or updated at seven locations, freeway signing was updated on Highway 401 and major bridge-deck joint repairs carried out on three structures.

Four new sand domes were constructed in the region and an experimental timber truss dome strengthening project was undertaken at Forest Home. Also, the Barrie and Coldwater Patrols received new garages.

Municipal

A total of $114,158,442.55 in subsidies was paid to counties, regions, cities, towns, villages, townships and Indian reserves in the region. Approximately $4,700,000 was expended on 40 connecting link projects and $670,000 on six development road projects. In keeping with the Ministry's program of supporting the replacement or repair of deficient bridges, during the past year, some 42 structures were replaced and another 34 repaired.

Drivers & Vehicles

This office, consisting of 186 staff, comprised three districts headquartered at London, Windsor and Kitchener. Under the direction of the regional office, activities involving driver examination, licence issuing, driver improvement counselling, vehicle inspection and the enforcement of various provincial and federal statutes regulating the movement of people and goods were carried out.

The 1981-82 fiscal year brought

A resurfacing project using re-cycled asphalt

about further decentralization in the establishment of both a regional investigations and prosecutions office as well as an agents control unit.

The former, even though not fully staffed until January, completed 138 compliance audits, dealt with 21 complaints and conducted 356 investigations on unlicensed trucking. Extensive training in head office did not allow for the completion of any motor vehicle licence issuing agent audits prior to the end of the fiscal year.

The economic decline appeared to have minor impact on the demand for driver examination services. Road tests amounted to 90,800, pre-examinations 132,827, and replacement driver's licences 26,552.

It is also undeterminable whether or not the probationary driver's licensing system caused a decline in the number of demerit point (8,670) and accident repeater (47) interviews conducted. However, hearings rose to 91 and 67 medical waivers necessitated almost immediate scheduling.

The three MTC issuing offices conducted 157,308 transactions and generated $5,413,563 in revenue.

Vehicle inspection experienced an increase in activity. Staff performed 9,158 motor vehicle inspection station audits, 2,134 school bus inspections, 925 inspections of other types of buses under regulatory control, and carried out 9,035 commercial motor vehicle checks.

This year, the mini-lanes were utilized more extensively. This operation, along with the regular summer portable lanes, subjected 10,131 vehicles to mandatory inspection and caused either the removal or surrender of 2,570 sets of plates.

Despite the fact that the highway carrier working force was substantially reduced because of the regional investigations and prosecutions team training sessions, an increased number of vehicles (615,425) were inspected at both the truck inspection stations and in area patrol. This resulted in 12,823 reports on alleged violations.

Eastern Region

Construction

Piers, abutments and approach fills were completed on the new Norris Whitney Bridge which will carry Highway 14 across the Bay of Quinte, south of Belleville.

With the completion, late in 1981, of a 6.1 mile section of New Highway 17, from Highway 41 westerly to Renfrew County Rd. 17, the grading of the Pembroke Bypass was finished.

A resurfacing contract, from 8.7 km east of Highway 37 easterly 26.9 km was completed in the fall of 1981, utilizing a portion of the existing pavement in the resurfacing.

Highway 401 from the Quebec boundary westerly 16.3 km to Lancaster was resurfaced and another resurfacing contract on Highway 401 from 2.0 km east of Highway 16 easterly 16.6 km was 90 per cent completed.

Construction or reconstruction was also carried out on Highways 2, 14, 16, 17, 31, 33, 34, 37, 60, 62, 417, 500, 509, 511 and 620.

Engineering & Right-of-Way

Nineteen capital construction projects were prepared for award. An additional 35 miscellaneous projects were also processed by office staff.

A major study on a Highway 16 corridor was initiated to determine the final connection to the City of Ottawa. A multi-disciplinary study, it involved representatives and councils from the cities of Ottawa, Nepean, and Kanata, the Regional Municipality of Ottawa-Carleton, the National Capital Commission and the MTC. The study was 75 per cent complete.

Maintenance

Major winter activities consisted of 1,333,211 kilometres of snow plowing and the use of 85,307 tonnes of salt and 53,209 cubic meters of sand for spreading.

Summer maintenance activities included 5,271 kilometres of centre-line and 4,426 kilometres of edge-line painting. Some 29,231 trees and shrubs were planted, and 2,837 hectares of brush and weeds sprayed. Two traffic sets were erected and five updated, 109 luminaires erected.

Municipal

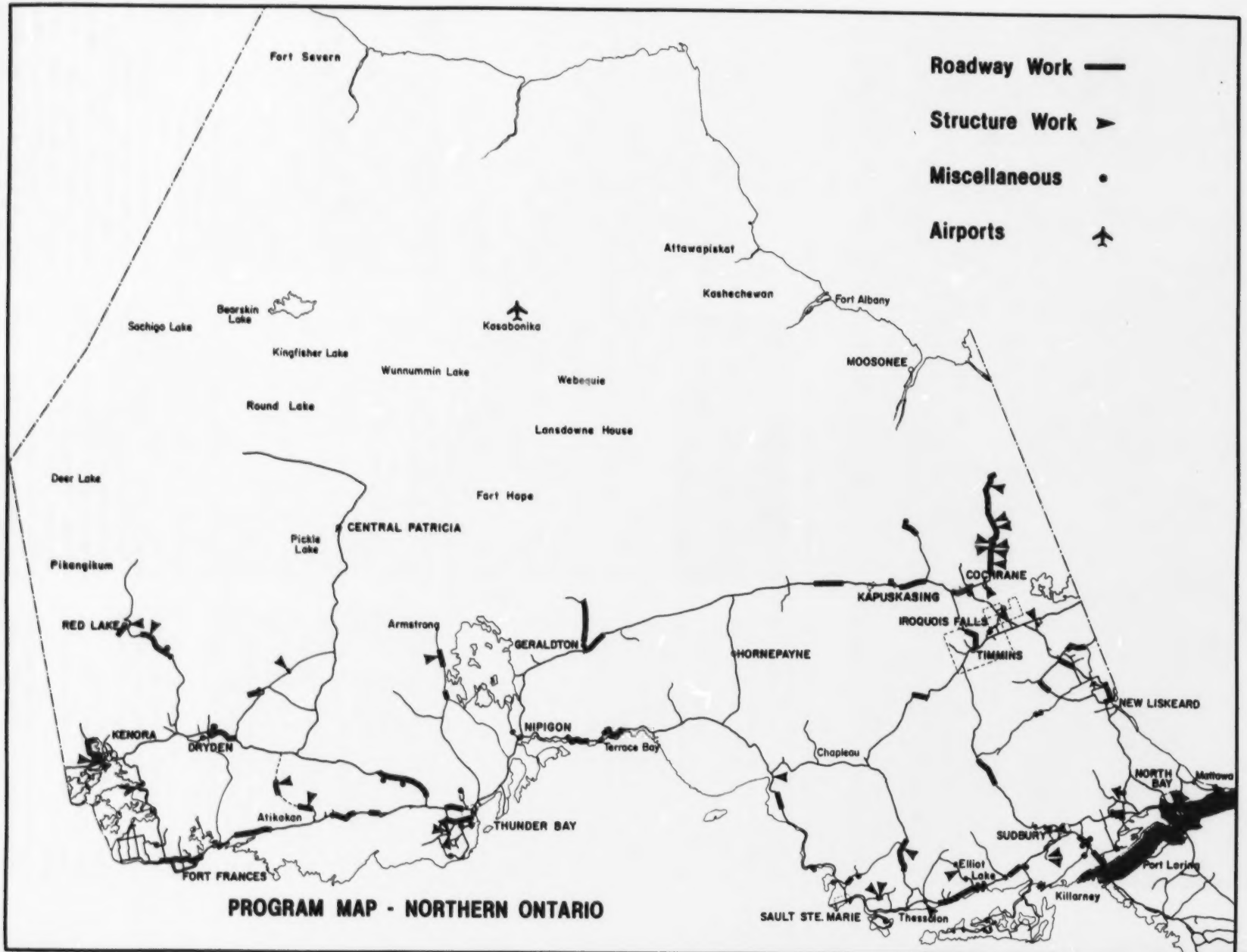
A total of $83,837,557 in subsidies was paid to regions, counties, townships, municipalities and Indian reserves. In addition, the region expended $2,988,420 under connecting link agreements and 26 development road projects received $4,136,100.

Provincial contributions were also made to the airport program, $6,585; ferries, $715,337; and traffic signals, $375,061.

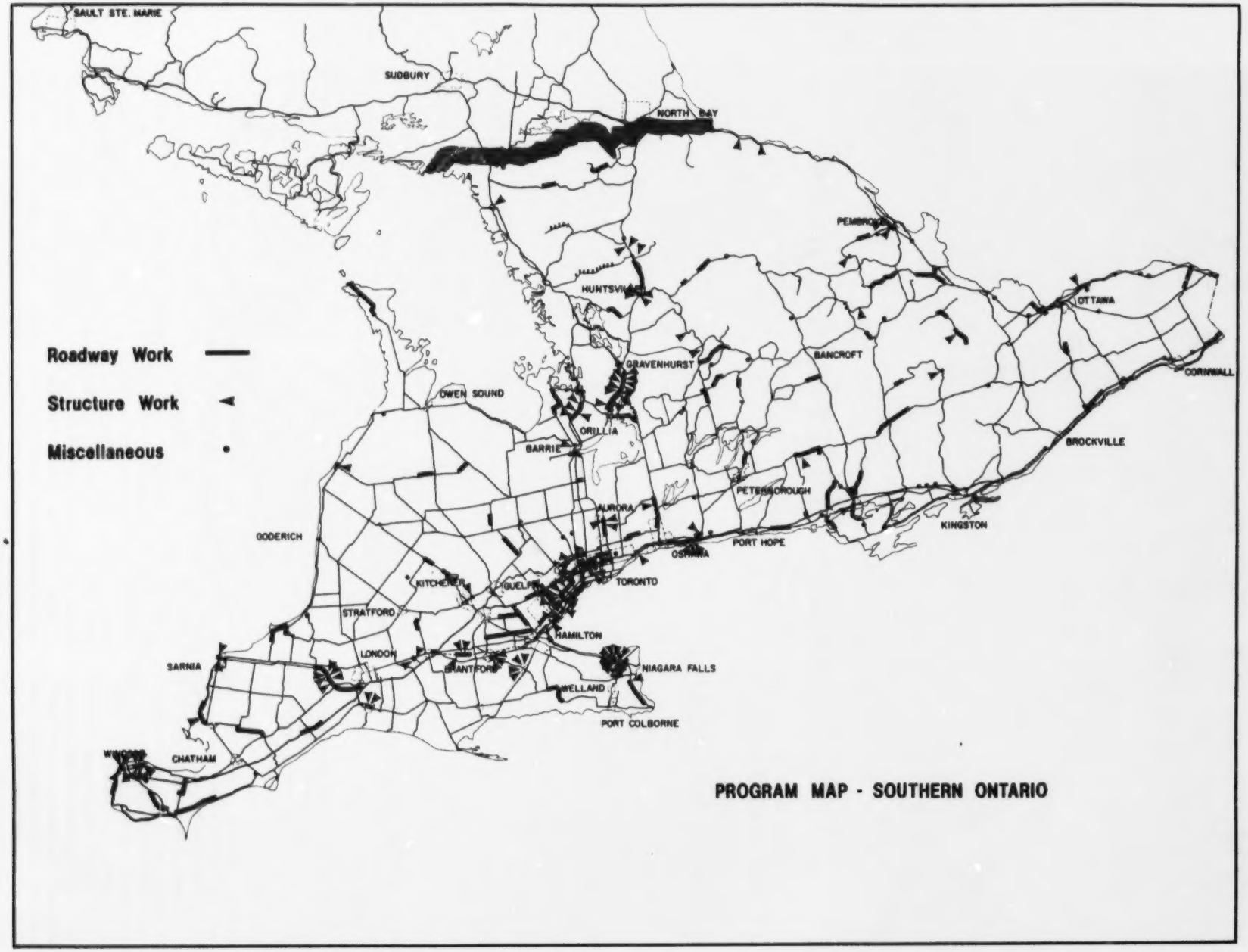
Drivers & Vehicles

Staff conducted some 95,703 pre-examinations and 55,229 road tests were for driver's licence applicants. Driver improvement counsellors held 4,194 demerit point interviews, 81 hearings, and nine accident repeaters.

Inspections of 5,615 commercial motor vehicles were carried out at roadside or truck terminals; 4,072 vehicles inspected by the portable inspection lane and 616 had serious defects; 3,156 school bus inspections were carried out while highway carrier inspectors checked 173,547 vehicles.



PROGRAM MAP - NORTHERN ONTARIO


SAULT STE. MARIE
SUDBURY
NORTH BAY
PEMBROKE
HUNTSVILLE
OTTAWA
BANCROFT
CORNWALL
GRAVENHURST
OWEN SOUND
ORILLIA
BARRIE
BROCKVILLE
PETERBOROUGH
AURORA
GODERICH
KINGSTON
PORT HOPE
OSHAWA
KITCHENER
GUELPH
TORONTO
STRATFORD
HAMILTON
LONDON
SARNIA
BRANTFORD
NIAGARA FALLS
WELLAND
PORT COLBORNE
CHATHAM
Roadway Work
Structure Work
Miscellaneous
PROGRAM MAP - SOUTHERN ONTARIO

Bridge deck repair at the Highway 427/QEW interchange

Engineering Materials Office

Pavement and Foundation Design Section

Foundation investigations were carried out appropriate reports for foundation design and construction prepared for a total of 90 structure and earth/rock work projects. Of these, 60 were done in-house and 30 by geotechnical consultants working under the direction of the unit. In addition, 57 foundation reports for inclusion in construction contracts were also prepared.

Preliminary and final foundation design drawings were reviewed for 75 projects scheduled for construction in the next two years. Specialist advice and service was provided to MTC, municipal and other agencies on all aspects of foundation design and construction.

This included some 35 MTC and municipal construction problems where site inspection by senior staff was necessary to provide recommendations for immediate remedial action. Such problems included embankment and other earthwork failures, culvert and tunnel failures and one abutment foundation failure on a municipal project.

An important contribution to foundation engineering was provided by the unit's publication entitled "Pile Load and Extraction Tests 1954-1980". The information was extremely valuable and when properly used can result in large savings in pile design. It has been widely acclaimed and in great demand by universities, consulting engineers and government, plus other agencies.

A seminar on limit state concepts of foundation engineering was organized and contributed to by staff in co-operation with the Consulting Engineers of Ontario and Canadian Geotechnical Society. It was attended by 300 geotechnical and structural engineers.

Seven different instrumentation projects were initiated to monitor settlements due to rock fill compressibility and consolidation of compressible subsoil. Also, in progress was an instrumentation project to monitor earth pressures and vertical and laterial deflections of a structure abutment founded on compacted granular soil.

Bituminous Section

A major study into the construction and performance characteristics of recycled hot mix continued: one interim report was issued and two technical papers were presented. Recycled hot mix now accounts for more than 40 per cent of the ministry's annual hot mix needs and provides a 20 per cent cost savings over conventional hot mix.

As part of the increased interest in preventative maintenance, a study of crack filling materials and methods was underway with a view to improving the performance of crack fillers, and the second interim report was issued.

Initiatives in the area of low-cost pavements included the writing of a specification for cold-mixed cold-laid bituminous pavements and approval of a second emulsified asphalt primer as an alternative to MTC's primer.

Specialist services in all aspects of bituminous materials, construction and maintenance were provided to the regions and districts, and municipal agencies on a limited basis.

Asphalt materials testing and mix design were carried out for central region and for the other regions on request.

Work also started on development of a statistically-based quality-assurance system for the evaluation and acceptance of newly constructed hot mix pavements.

Concrete Section

Through participation in the activities of various committee and task forces and the establishment of policy, staff continued to play a major role in the development of technology and procedures for the maintenance and rehabilitation of structures and increased durability in new construction.

Epoxy coated bars, increased concrete covers and a higher quality concrete were specified for some substructure elements such as abutments and piers. The minimum thickness of bridge decks and barrier walls was increased.

The first audio-visual training aid on bridge deck rehabilitation was issued to the regions. A division directive was published to clarify responsibilities of various MTC units with regard to the rehabilitation of bridge decks.

Work progressed on the development of performance type specifications for concrete construction and responsibility for the quality of the work was placed on the contractor. A performance-type specification was simulated on two composite pavement

Testing pavement reflectance

contracts in southwestern region. A division directive was issued covering acceptance/rejection guidelines for nonconforming work under the existing specifications.

New policies were introduced governing certification of private concrete testing laboratories. Starting in the three southern regions beginning in 1983, only CSA certified laboratories will be recognized. Correlation test programs with the private laboratories were completed with respect to concrete strength tests, core tests and chloride content.

Work also continued to find ways of using local Muskoka area granitic aggregates in concrete construction and an eminent U.S. consulting engineer assisted in this project.

Technical reports were completed on blast furnace slag cement for concrete construction; the use of lean concrete base in pavement work; strength and potential durability of bridge deck concrete; the effect of various Ontario portland cements on the strength of concrete; and performance of bridge deck expansion joints.

Pavement Unit

Staff took a leading role in task forces/committees on recycling of asphalt pavements, planned quantity payment, provincial standards and new specifications.

Phase I of the semi-automation of the photo-interpretation method for pavement friction level determination was completed. A prototype of a new photo-acquisition system was fabricated, and a new advanced pavement friction-testing brake-force trailer went into operation.

Road roughness measurements utilizing the Mays Meter were carried out on 2,882 kilometres of highway on 91 projects.

Chemicals Section

Staff continued activities related to the maintenance and updating of the designated sources list of materials used in highway construction and maintenance operations, the provision of expertise (advice, trouble shooting inspection/testing, seminars) for all regions.

Technical reports were published on: a comparative study of the durability of the coatings for four types of pre-finished noise barrier panels; performance of an asphaltic-base corrosion-preventive coating compound for use on salt-sand hoppers; testing of well waters that may be or have been affected by ministry winter maintenance activities.

The section participated in a major review and revision of the procedures for structural maintenance and rehabilitation. In this realm, it provided technical input for the surface preparation/inspection procedures and materials specifications.

It also participated in the metrication of several CSA specifications related to galvanizing, welding, concrete pipes and poles.

Soils & Aggregates Section

With input from the section, a special provision, dealing with a statistical approach to quality assurance for one of the most commonly used construction aggregates, was prepared and inserted into all contracts. This rational approach introduced a fairer and more objective way of assessing quality, and it will be used, in future, for other materials.

An industry-wide study revealed that aggregate producers appear ready to develop and utilize a process control system to control their output. This would be in their interest as producers to reduce their risk, and it would be in the interest of the buyers because their risk would also be reduced. MTC will provide help in setting it up.

Within a general ministry policy, the review of municipal official plans and zoning by-laws became the responsibility of the regional offices.

A material specification for engineering geotextiles was issued along with a list of acceptable products and suppliers. More use for this product is gradually being found in the field.

A microcomputer for use in laboratories was also installed in order to efficiently process the large amount of test data previously handled either manually, or by less sophisticated calculators.

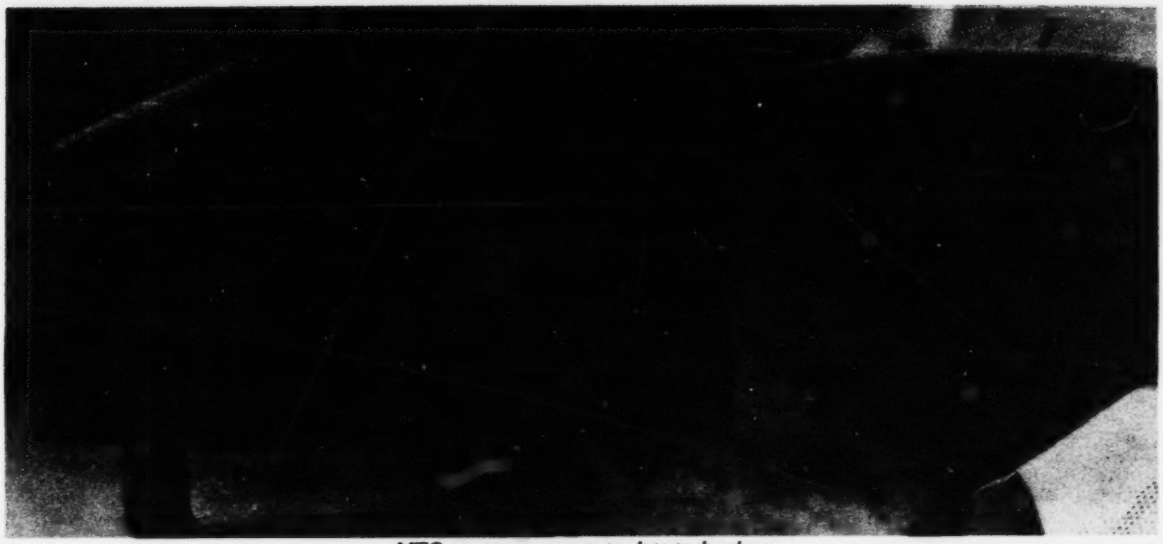
Highway Standards Office

The provision of up-to-date standard specifications and drawings, related policies and procedures for the design, construction, maintenance and safety of highways was the major responsibility of staff.

Progress was made in the development of uniform Ontario provincial standard specifications and standard drawings in conjunction with the Municipal Engineers Association.

Standard drawings section personnel assumed responsibility for the abbreviations and symbols manual which is undergoing a complete revision. Three hundred and sixteen standard drawings were developed and revised for the structural, electrical, roads barriers and drainage manuals. One hundred and fifty-two standard drawing modifications were provided for specific projects.

And the section head took over the



MTC surveyors use up-to-date technology

duties of secretary of the new products committee. Twenty-eight submissions for new products were presented by the secretary on behalf of manufacturers.

The standard specifications section produced nine new construction and material specifications and revised 13 specifications. Six specifications and one supplemental specification were cancelled.

Apart from the normal production of standard special provisions for contract documents, special provisions were prepared for 63 tender items to be included in the new "plan quantity" payment concept.

Structural Office

Design of the new Burlington Skyway was the major bridge project, involving over half the staff of the operating sections. Alternative designs in steel and prestressed concrete for both the main span and the approach spans were nearly complete, with calculations checked by consultants.

Due to the size of this project, an unusually high proportion of other bridge designs was assigned to consultants. Staff supervised the design of 33 bridges by consultants, compared to 16 the previous year, and completed the in-house design for 18.

Construction of the first segmental prestressed concrete bridge on the provincial highway system was completed over 12 Mile Creek on Highway 406. The assignment of two design engineers to the regional construction office for this project was key to the successful application of this new form of construction.

The work of the task force on procedures for structural maintenance and rehabilitation continued with the assistance of four consulting firms. Several quality standards for routine structural maintenance were incorporated in the maintenance manual and guidelines for the preparation of a multi-year plan by the regions were issued and implemented.

In the approvals section, the number of bridge evaluation checks matched those of the previous year, but the 177 checks of new municipal bridge designs was down by about 20 per cent. Total workload was the same — highlighted by the Burlington St. reconstruction project for Hamilton-Wentworth.

Review work included service to the Ministry of Natural Resources on 10 of their bridges. Staff worked with the Ministry of Citizenship and Culture on a report for heritage bridges, and prepared a list of about 175 with possible heritage interest.

In the procedures section, the computer program OSCLIS was completed to make bridge clearance and load restriction data available to the regions. The major computer program development work continued to be the Ontario Modular Bridge Analysis System (OMBAS).

With the first phase scheduled for completion by late 1983, enabling publishing of the second edition of the Ontario Highway Bridge Design Code which will be available in late 1982.

Surveys Section

Section staff established and evaluated horizontal control survey monuments on the Ontario co-ordinate system — 509 monuments were established and evaluated in 1982. In addition, 116 horizontal control stations were established for construction; 311 precise bench marks on geodetic datum were established and added to the vertical control system.

During the past year, 1,033 legal plans were examined and 550 km of highway designated as controlled access highway (total length now 7,154 km).

Training of staff continued with 16 candidates in surveying or drafting; nine candidates successfully passed qualifying exams.

Aerial Survey Section

Section staff delivered 177 photogrammetric engineering plans during the year, broken down as follows:

— Small scale 1:10 000 5m Contours
  (a) In-house 23700 Hectares
  32 Models 1 Plan

— Medium scale 1:2 000 2m Contours
  (a) In-house 25560 Hectares
  188 Models 42 Plans
  (b) Consultants 3229 Hectares
  23 Models 5 Plans

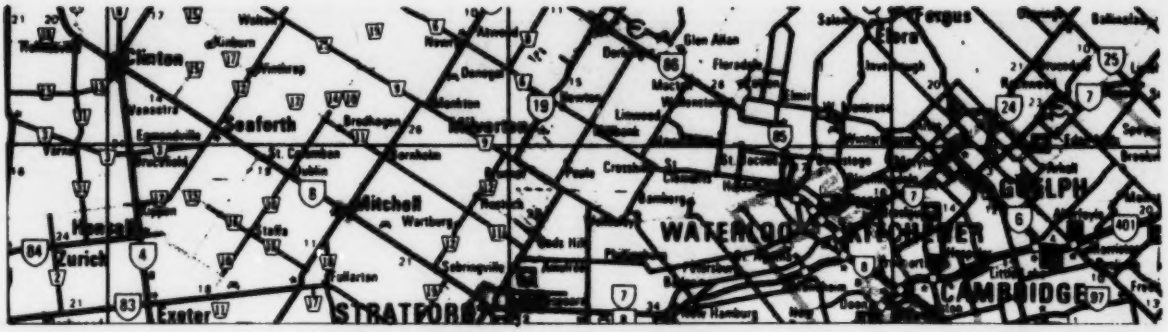
— Large scale 1:500 0.5m Contours
  (a) In-house 3249 Hectares
  416 Models 60 Plans
  (b) Consultants 659 Hectares
  97 Models 17 Plans

— Large scale 1:1 000 1m Contours
  (a) In-house 508 Hectares
  76 Models 2 Plans

— Large scale 1:500 Planimetric No Contours
  (a) In-house 1957 Hectares
  213 Models 39 Plans
  (b) Consultants 425 Hectares
  86 Models 10 Plans

— Measured Cross-Sections 1:500
  (a) In-house 146 Models
  40 km

To complete the above, 3,670 km of aerial photography was flown, for 40 mapping and 28 non-mapping projects; 23 oblique photography projects were also completed.



Highway Operations Branch

Cartography Section

Staff continued production work on the new Ontario transportation map series at scale 1:250,000 which will replace the present county/regional municipality lithograph map series at 1:250,000. The first three are scheduled for printing in the fall of 1982.

The 1982/83 official road map, the 1981/82 airport facilities map as well as 16 revised county regional municipality whiteprint maps and a revised MTC region and district boundary map were produced.

In addition, the following requests were satisfied: 79 for cartographic services resulting in 283 base maps; 341 base film duplicates; 24 miscellaneous graphics; 18 for road information compilation; $3,908 map base film sales to the public.

Remote Sensing Section

Staff continued with established priority projects, and two state-of-the art reviews on remote sensing applications were privatized. Professional services continued to be provided, on request, to head office and the regions.

Under the aegis of the Canadian advisory committee on remote sensing, the second national workshop on engineering applications was conducted to formulate recommendations to the federal government on national programs.

Training in engineering applications of remote sensing was provided for MTC staff and other agencies with two one-week remote sensing seminars and the 6th Annual Remote Sensing Conference.

The section also provided aerial photographic mosaics and image library services to the ministry and others, 1,181 m^2 of mosaics and related products were produced and 1,804 requests for image library services were processed.

Contract Management Office

Staff is responsible for the preparation of final documents for the tendering of ministry contracts. It also provides the official interpretation and clarification to contractors during bidding stage. During the past year, 237 contract awards were processed.

It also has responsibility for development of new policies and procedures related to the contract management, manpower management, and staff training required for MTC construction activities. It also provides technical recommendations on those matters above regional authority. The major thrust for these policy matters includes:

- completion of a policy and method of introducing payment to contractors from plan quantities;
- changes to policies and procedures with respect to the quality assurance requirements during construction.

Environmental Office

Staff was responsible for the development and co-ordination of natural and cultural environmental policy, guidelines and procedures for MTC's programs and agencies.

During 1981-82, they were involved in providing interpretation and clarification of environmental assessment matters to the regional planning and design sections, the municipal office, the air office, the communications division, the Toronto Area Transit Operating Authority and the Urban Transportation Development Corporation.

With the Environmental Assessment Act, 1975, operational for several years, staff monitored its effects on ministry programs and modified internal policies and procedures. In particular, a "one-state" submission approach was initiated for the ministry's projects requiring individual approval under the EAA in an attempt to eliminate time delays associated with the former two-stage submission process.

As part of ongoing environmental development activities, expertise and documentation was developed in such technical areas as noise, groundwater, erosion control, and environmental quality control for operational staff. The latter included presentations and programs on environmental sensitivity and awareness MTC's construction and maintenance staff.

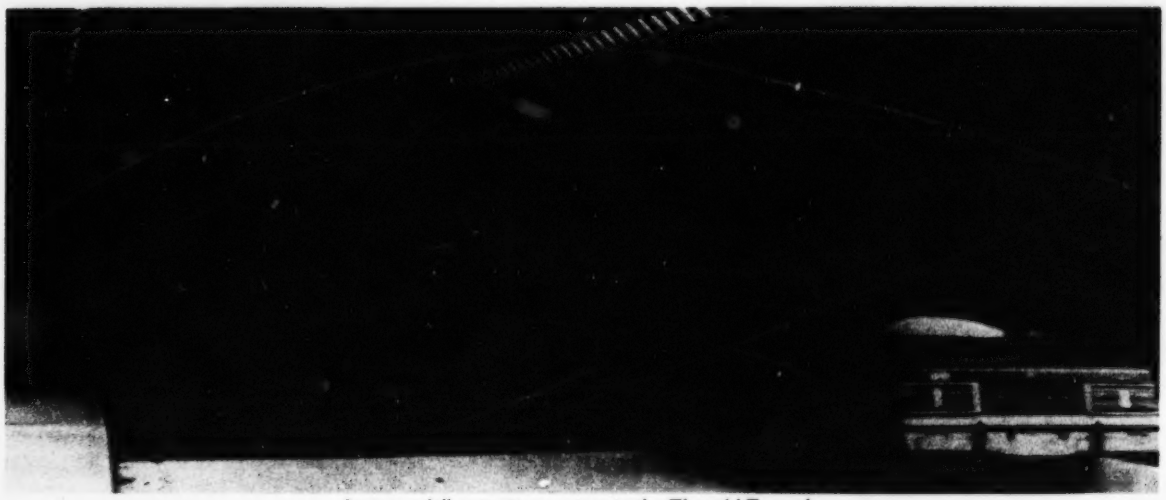
Highway Design Office

Office staff was responsible for five major areas of highway design policy: corridor control; preliminary design; detail design; drainage and hydrology; and electrical design and development.

Corridor control section reviewed some 4,500 land development applications, developed and implemented provincial guidelines. Also, a provincial policy statement on highway access was prepared, which the Ministry of Housing will issue in conjunction with The New Planning Act.

Preliminary design staff developed a policy for shoulder paving on King's Highways, prepared a metric version of the commercial site access policy and standards manual; as well, initialling development of design standards for low traffic volume secondary highways. Also, 250 legal agreements for consultant assignments were processed and a number of policy directives prepared.

Detail design personnel initiated and updated procedures and guidelines pertaining to highway design; the refinement of noise barrier designs, and adaptation of a new energy-absorbing



Improved illumination system in the Thorold Tunnel

median barrier for pilot installation on an Ontario freeway.

Drainage and hydrology section people made progress on developing new technology for the drainage manual. Training and implementation in the regions was initiated. Assistance and participation was given to servicing the bridge code, and the urban and land drainage committees.

Electrical design and development section staff made progress toward completion of the traffic signal specifications. Design drawings were completed for 131 projects, of which 84 were prepared by consultants. Total construction cost was $13,703,000. New technology for a variable lighting system was applied to 10 projects and provision for the freeway traffic management system were incorporated in 11 projects.

Maintenance Management Section

This section is responsible for establishing policies and procedures for general highway maintenance; the maintenance management system; and preparing operating instructions and quality standards for highway, structural and roadside maintenance.

During 1981-82, 79 private snowplows were used in place of MTC plows and crews, an increase of 35. Districts will attempt to hire 120 private plows next winter.

Twenty-one extra wide plows were used during the 1981-82 season. They clear a wider path than standards without wings, and operated by one person, resulting in a reduction of 42 staff.

Operating instructions were prepared and issued for routing and sealing of cracks, snow fence and snow hedge erection and location, winter preseason preparations, and snowplow complement calculations. These instructions improved the efficiency and productivity of patrols and crews.

New maintenance quality standards were issued for bridge inspection, treatment of obstructions at bridge sites, brush control at bridge sites, maintenance of bridge hand rails, erosion at bridge sites, bailey bridges and concrete sealing of structures to ensure uniform quality.

Eighteen winter maintenance training courses were given in nine districts to standardize maintenance procedures, ensure efficient and effective operations, and prescribed levels of service. A first line supervisor's workshop was also developed, designed to assist supervisors in dealing with personnel matters, the public, and government policies and procedures.

The working groups assigned to study the implementation of the operations management system, and its co-ordination with the maintenance management system made their recommendations. New input documents and reporting procedures were recommended; new reports; modification of others and elimination of some was recommended. The list of operation code numbers was modified. Testing and implementation of these recommendations will continue in the coming year.

Special Maintenance Services

Field test applications of pavement marking tapes were completed and the reports on their performance reviewed and evaluated. Subsequent recommendations will be made and a policy established for the use of these pavement marking materials by the ministry.

The conversion of our zone striper fleet to a hot-paint operation continued with the conversion of four more standard stripers to hot paint units. The ministry had 19 stripers, 13 hot paint and six standard paint machines operating during the year.

A new raised pavement marker developed and produced in Canada was introduced by MTC. A number of these markers were installed late in the year. Their performance is being monitored.

The policy of decreasing the stripe/gap ratio of lane-line pavement marking on certain freeways was extended to include all multi-lane highways. Increasing the gap between the 3m stripes of the broken line pattern on this type of highway reduced the material cost of pavement marking with no significant loss in traffic-lane delineation.

The specifications for glass beads used to reflectorize our pavement markings were reviewed and revised to comply with those of AASHTO, i.e. a reduction in the percentage of true spheres, will greatly reduce the amount of energy used in their manufacture.

As a result of an extensive review of our sand storage dome building program and the availability of commercially fabricated domes, there was an increase in the number of such domes acquired by the ministry from the private sector.

Following recognition of the diminishing quality of the standard plywood used for highway sign manufacture, arrangements were made for a trial field installation of a new type of plywood material. Its performance will be monitored and a decision ultimately made as to its application.

Polyethylene material, because of reduced cost and good durability, was adopted as an acceptable alternative to metal for the manufacture of some construction signs.

An example of highway landscaping

Landscape Planning and Operations

During the year, considerable effort was expended in the study of erosion control. The seeding specification used in ministry contrcts was completely re-written in an effort to improve the end result. This new specification incorporated all of the mulches into one document while taking into consideration seasonal differences across the province.

A draft directive on the implementation of the revised seeding specification was prepared and submitted to regions and districts for comment. The directive was re-written, incorporating the concerns and comments submitted, and was issued as policy.

A thorough review of the fertilizer used in the grass seeding operation was carried out to determine if changes could be made to improve the results. As a result the fertilizer analysis was altered reducing material costs, equipment maintenance costs, and energy needs for the fertilizer manufacture.

An extensive questionnaire was circulated to region and district staff, requesting data on the storage, decontmination and disposal of pesticide containers. A draft directive was prepared concerning handling of pesticide containers based on the replies received. Following a review of any further comments from the regions or districts a final directive will be issued.

In an effort to further privatize the landscape operations, a specification was prepared to carry out the maintenance of newly planted trees by contract. It will be tried on a site specific basis, and based on its acceptability in the forthcoming season will be made available to all regions and districts requiring the service.

On behalf of the regions 36 landscape plans were prepared for completion in the spring of 1982. Three of these plans were completed by consultants. In addition, landscape planners contributed information on vegetation removals, selective clearing, natural regeneration, landscape concepts and aesthetics on a total of one hundred and five regional planning and design projects.

Three landscape contracts were inspected by landscape archetectural consultant firms. A policy directive on landscape funding on capital construction projects is presently being prepared.

Estimating Office

Estimating office staff, operating with a complement of 25 prepared the official cost estimated on 291 contracts with a tender award value of $286,336,388.40. Recommendations for award were made to senior ministry officials on 286 contracts and non-award on five.

Personnel also produced numerous construction cost comparisons, made recommendations for cost effective design alternatives, contract item unit price negotiations and provided preliminary project value estimates for the mutli-year program.

Staff also developed direct energy consumption factors for roadway and bridge construction, as well as co-operating with the private sector and provincial and federal government departments in construction cost and quantity related matters.

Finally, they prepared annual reports on unit bid prices, cost-per-mile of construction, equipment rental rates and minimum truck haul rates for internal use and outside agencies.

Electrical Maintenance Section

Electrical maintenance section staff carried out the following activities during the fiscal year.

- Conducted a study review of maintenance and operating costs for overhead sign illumination to determine a more economical method of illumination;
- Developed a policy directive provincial roads B-30 to provide lightning protection on traffic signal control equipment reducing damage to signal equipment;
- Revised policy directive provincial roads B-59, conversion of existing roadway lighting to high pressure sodium lighting to utilize lower wattage lamps for energy conservation;
- Co-ordinated electrical training courses with the Electrical Utilities Safety Association for district staff members to provide increased expertise in electrical procedures;
- Introduced the use of more efficient wattages for lamps in conjunction with roadway lighting luminaires reducing electrical energy requirements while maintaining lighting levels;
- Provided expertise to regional and district staffs on maintenance problems and procedures;
- Revised ministry policy to individually relamp luminaires on a maintenance requirement basis replacing group relamping systems, reducing maintenance crew activities and annual costs.

Repainting the white lines after a long winter

Equipment Engineering Office

Staff was responsible for evaluation of all the new models of vehicles introduced, and selecting the most appropriate models and features for use by this ministry. **Additionally, highly specialized equipment was evaluated and considered for use by MTC including:**

- Fourteen-foot Polymar power reversible plows, to reduce manpower and labour costs, required to open roads following snow storms;
- Diesel powered sander bodies and diesel powered half-ton vehicles, to reduce MTC's consumption of gasoline, and costs of providing essential services and maintenance;
- Class 101 Babcock-Allatt grader, for maintaining shoulders at minimum cost by downsizing;
- Paraplastic maintenance kettle by Crafco, for road maintenance crack filling, in an effort to increase productivity without increasing manpower in effecting road repairs;
- Self-propelled power sweeper by Timco, a new product on the market, evaluated for its applicability to the ministry;
- Heat treated and tungsten carbide snowplow blades, in a quest for maximum durability at minimum cost;
- A zone striper by Roadline International, a new product on the market, evaluated for its applicability to MTC; and,
- Front axle loading of snowplow tucks was launched, to improve the load distribution and reduce the associated maintenance costs.

The bubbling system (used to facilitate winter navigation by passenger ferry boats) was monitored for effectiveness, and correlated with the degree days of heating information available from the Dominion Bureau of the Environment, to determine the submerged system's condition.

Zone striping operations were studied, to determine appropriate equipment requirements. It revealed the need for a re-evaluation of the appropriateness and adequacy of the traffic paint-purchasing procedures. As this aspect could most appropriately be determined on location, London district was asked to perform an in-depth study, currently in progress.

The acquisition of all replacement and additional equipment amounted to approximately $7,800,000. Among the acquisitions were: 22 propane powered vehicles; 107 conversions from gasoline to propane power; 31 mini pickups; and, 21 fourteen-foot Polymar power reversible snow plows.

Three more zone stripers were converted to hot-paint operation, to increase the ministry's production capacity and further reduce the labour content. Special weedsprayer units were constructed to control the growth of weeds on the right-of-way. As well as killing noxious weeds, this process reduces labour costs of cutting roadside grass.

A hydraulic powered system of squeezing laminated bridge decks was built for use by the research branch, in a successful program to reclaim deteriorating wooden bridge decks. And a mobile bridge height clearance measuring device was developed and built by staff to determine bridge-clearance heights.

In conjunction with the research branch, a tire side force measurement vehicle was developed and built to be used by research to determine the side force a truck tire can stand in an effort to reduce truck-related accidents on highways.

Staff also developed methods for evaluating privatized equipment repairs. Guidelines were prepared for district use.

User groups continued with development of the equipment management aspect of the OMS. The output working group completed its report, identifying data requirements at the various managerial levels, and the input working group worked on design on retrieval-of-information documents.

In a quest to obtain maximum benefit at minimum cost, and responding to the strategic policy guidelines, organization of a technical training centre took place. Additionally, staff resolved a number of technical problems and provided interim solutions until manufacturers were able to respond.

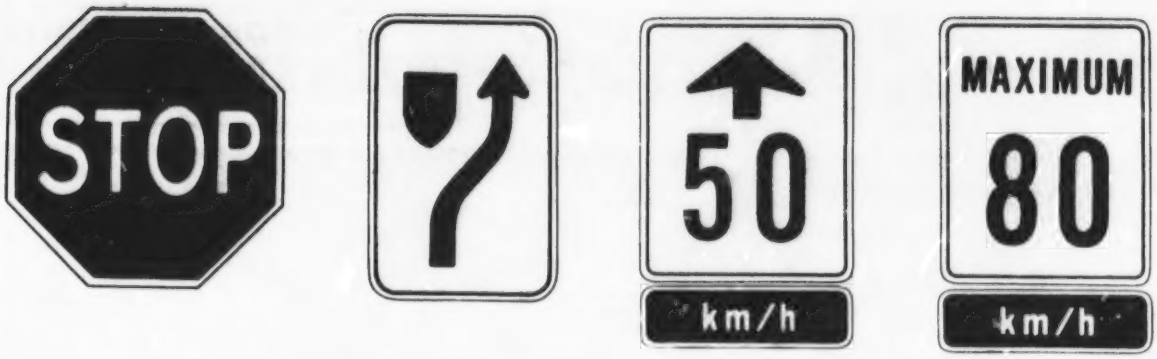
To guarantee a minimum of downtime, and optimum usage of MTC equipment, numerous courses were given to district mechanics and operators, as well as those of other ministries and municipalities. This enabled personnel to utilize and service the latest diesel and propane-powered equipment, latest air brake systems, and compressors.

Signs and Building Permits

Building permits issued by the 18 districts under the policy direction of head office totalled 1,663 with a value of $405,625,751.

The number of field advertising permits issued was 7,533 valued at $99,247; 2,601 guide sign permits were issued generating $49,843 in revenue.

Other permits issued included 1,082 encroachment permits valued at $25,640; 1,888 entrance permits valued at $13,625 and 1,789 location, portable and temporary sign permits valued at $33,905.



Traffic Engineering Office

Office staff developed policies, procedures, standards and specifications; provided technological leadership and carries out development of traffic signs and markings, signals, electronic control systems, freeway traffic management and traffic accident data and traffic analysis.

In traffic signing, new policies and sign standards included a "supplementary contract" sign to identify projects funded by BILD; diagrammatic freeway signs and signs for truck ferry service, bus terminals, and parking for handicapped.

Signs were also developed to promote proper use of paved shoulders on Highway 69, where drivers are encouraged to pull onto the shoulder to permit other drivers to pass. A new interchange numbering system on freeways was introduced, identifying interchanges by the kilometric distance from one end of the freeway rather than by the previous consecutive numbering system.

New signs were developed to identify the Terry Fox Courage Highway, a designated 100-km section of Highway 11 and 17 between Nipigon and Thunder Bay. A new marker was developed to indicate accommodations which meet the criteria of the Tourism Ontario accommodation grading program.

Traffic data was collected for the purpose of reviewing the ministry's signal timing and capacity analysis methods and to revise the signal capacity chapter of the ministry's geometric design manual. New traffic signal warrants were introduced and their application will be monitored and assessed with respect to unwarranted signal installations. A new amber arrow signal indication was developed, as were standards and guidelines for its use.

Development and implementation of microprocessor-based traffic signal controllers ("Model 170") continued. Approximately 100 were operated by the ministry as of March, 1982. A large proportion of these were manufactured in Ontario.

Development continued on monitors for the 170 system capable of detecting abnormal or conflicting signal indications, should they occur. The municipal traffic control systems (MTCS) project, initiated by MTC continued. This project involved the installation of computerized traffic control systems to standard specifications and capabilities. The systems in Brantford and the Regional Municipalities of Durham and Waterloo neared completion under a common procurement contract.

Oakville has purchased a similar system, for completion in 1982-83. Mississauga and London undertook feasibility studies of computerized traffic control signals, and MTC provided both technical and financial assistance on these projects.

In freeway traffic management, a new section was added to the office for this purpose, with major initial emphasis on implementing the proposed freeway traffic management system on Highway 401 through and adjacent to Metro Toronto.

It will include changeable message signs, vehicle detectors, computers, and closed circuit TV with remote control functions, and be used to improve conditions resulting from traffic congestion. It will also be used to provide accurate and timely information on accidents and incidents to the Ontario Provincial Police, to assist them in responding rapidly to accidents and managing traffic when they occur.

Further, the system will be able to provide current information on traffic conditions and advise motorists of construction and maintenance activities likely to be encountered. Another project was initiated to examine the feasibility of implementing a freeway traffic management system on the QEW in the vicinity of the Burlington Bay Skyway.

The QEW freeway traffic management system west of Highway 427 in Mississauga was expanded westerly to include the Ford Drive/Highway 403 interchange in Oakville, an addition of four km to the previous 10 km.

Second phase of the developmental work for the traffic accident information system was completed. This is the culmination of several years of work which provided a computerized file of all reported traffic accidents on provincial highways for the past three years.

It provided the capability for accident data retrieval and analysis through terminals in head office and regional offices. This data storage and retrieval system, a major improvement over previous manual methods, provided information for traffic engineering studies, safety programs and research projects.

Staff administered and assisted in traffic analysis operations studies for Hamilton (Mountain), Leamington, Richmond Hill, Region of Waterloo, Chatham, Perth, Metropolitan Toronto, Sault Ste. Marie, Fort Erie, Dryden, Orangeville, Collingwood, Pickering, Burlington, Kapuskasing, Niagara-on-the-Lake and the Region of York.

Development work on microprocessor-based permanent (continuous) traffic counting stations with telemetry capabilities continued. The annual monitoring of vehicle operating speeds on provincial highways was also continued. To meet the needs of planning and research studies, specialized traffic data was gathered throughout the summer, with assistance of students.

Safety and Regulation

Artist's conception of new John Rhodes driver exam centre

Transportation Regulation Division

This division, was responsible for program administration, investigation and prosecutions, occupational health and safety and highway carrier licensing.

Staff provided as required, policy, procedures and training for drivers and vehicle field operations to ensure the uniform application and delivery of the driver examination, vehicle inspection, highway carrier, and MTC occupational health and safety activities. In addition PCV and PV licences were issued to the holders of operating authorities emanating from the Ontario Highway Transporation Board.

This division is made up of the Licensing and Control and Program Development Branches. In addition to the branches, the division assumed responsibility for planning and co-ordinating the work to restructure the Licensing and Control Branch and move about 40 per cent of its staff to a new government building in Kingston, scheduled for completion in 1983.

Investigations and Prosecutions Office

The Investigations and Prosecutions staff monitored the compliance of the highway carrier industry with applicable legislation and regulations.

Over the past five years, a comprehensive off-highway enforcement system was developed for the conduct of in-depth investigations, requiring examination of all books, records and documents of carriers. Last year there was increased activity in the examination of licensed carrier's books, to establish if their operations were in compliance with the terms and conditions of their operating licences.

In the 1981-82 fiscal year, 1,463 cases were placed before the courts for contravention of the Public Commercial Vehicles Act, the Public Vehicles Act and the Motor Vehicle Transport Act (Canada). Approximately one-third involved purported leasing arrangements.

Investigations and Prosecutions office staff developed a comprehensive training program to enable personnel to teach all aspects of the knowledge required by an investigator. Training began in October 1980 to qualify enough investigators and supervisors to set up regional investigations and prosecutions offices covering all regions by the fall of 1982.

As a result, the first regional investigations and prosecutions office was established in S.W. region in September 1981, followed by the formation of an office in central region in October 1981. Establishment of an office in Eastern Region took place in May 1982.

All 10-province communications were further enhanced in September of '81 when office staff hosted an Inter-Provincial Conference in Toronto.

As a result, exchanges of information relating to investigations of for-hire carriage now takes place. Also reciprocal arrangements to serve summonses, subpoenas, notices of hearings and joint investigations were created. Under this arrangement some 886 summonses were served by other provinces for and on behalf of Ontario.

As a result of a meeting in February of '81, with the regional director, Office of Consumer Protection, Interstate Commerce Commission, the undertaking to serve summonses and subpoenas on U.S. based operators was continued during the last fiscal year. A total of 224 summonses served by U.S. officials for violations under the MVTA (Canada).

Program Adminstration Office

Staff promoted the delivery of uniform drivers and vehicles programs to the public, provided policy directives, operation procedures, technical expertise and training courses for driver examination, vehicle inspection and highway carrier field staff.

Program administrators assisted the Transportation Regulaton Operations Division in development of new or amended legislation, and co-ordinated implementation of new drivers and vehicles programs.

Ontario's driver certification program was monitored by driver certification officers working out of this office.

Highway Carrier Licensing Office

Staff was responsible for monitoring of Ontario Highway Transport Board certificates for compliance with the Public Commercial Vehicles and Public Vehicles Acts and the Motor Vehicle Transport Act (Canada); collection of revenue and the issuance of operating and vehicle licences associated with the Board issued certificates of public necessity and convenience.

During the past fiscal year, there were 4,764 certificates processed, 2,314 new and amended Public Commercial Vehicle and Public Vehicle operating licences and 68,903 vehicle licences and plates issued.

Occupational Health and Safety Office

Occupational health and Safety staff in head office and the regions, continued with the first stages of the hearing conservation program. To date 5,000 audiometric examinations have been completed and noise evaluations carried out in many areas.

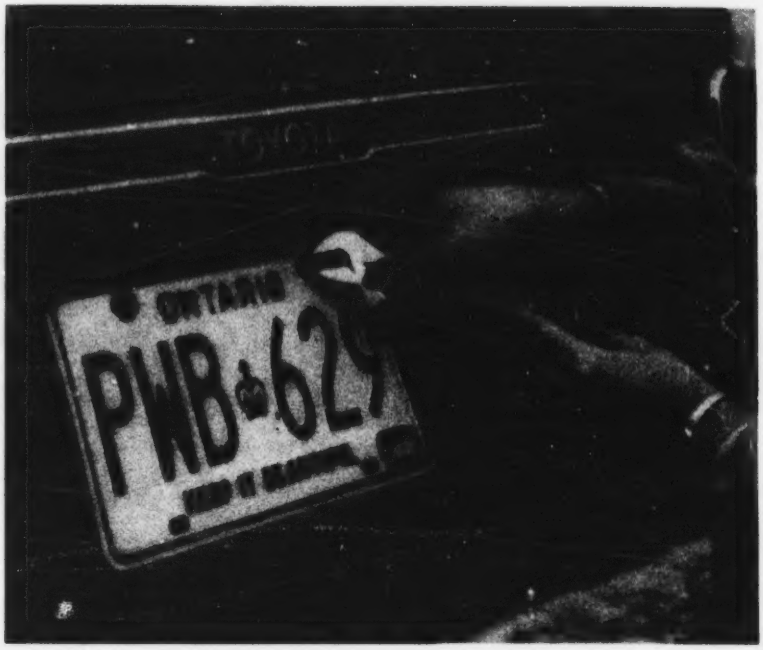
A back care program was approved and all health and safety personnel trained to present it. To meet the increasing concerns of employees using video display terminals, OHSO undertook a study to determine the relative importance of the various ergonomic and environmental factors.

A comprehensive study of the Workmen's Compensation Board function within the ministry was carried out and recommendations made to streamline the clerical function and upgrade MTC's response to personal injuries.

In keeping with the increasing emphasis on prevention, particularly in health areas, OHSO completed planning for a pilot study dealing with the problems of smoking in the workplace. The ongoing programs in first aid training, hazard recognition, medical surveillance and environmental testing continued.

Vehicle Registration System Project

The detail design phase of the new vehicle registration system was completed and programming started. Manual procedures and operating manuals were being prepared.



Testing procedures and training packages were designed and an overall plan to implement the system was put in place. Terminal hardware was selected to provide on-line service to each license issuing office.

A contingency plan was implemented, allowing consideration of various fall-back positions should delays develop in any aspect of the system which might affect start-up presently scheduled for Dec. 1, 1982.

Licensing and Control Branch

Licensing Systems Improvement Office

Over and above monitoring the existing systems and initiating corrective action as required, this office was also responsible for the development of new and revised driver and vehicle licensing and control systems.

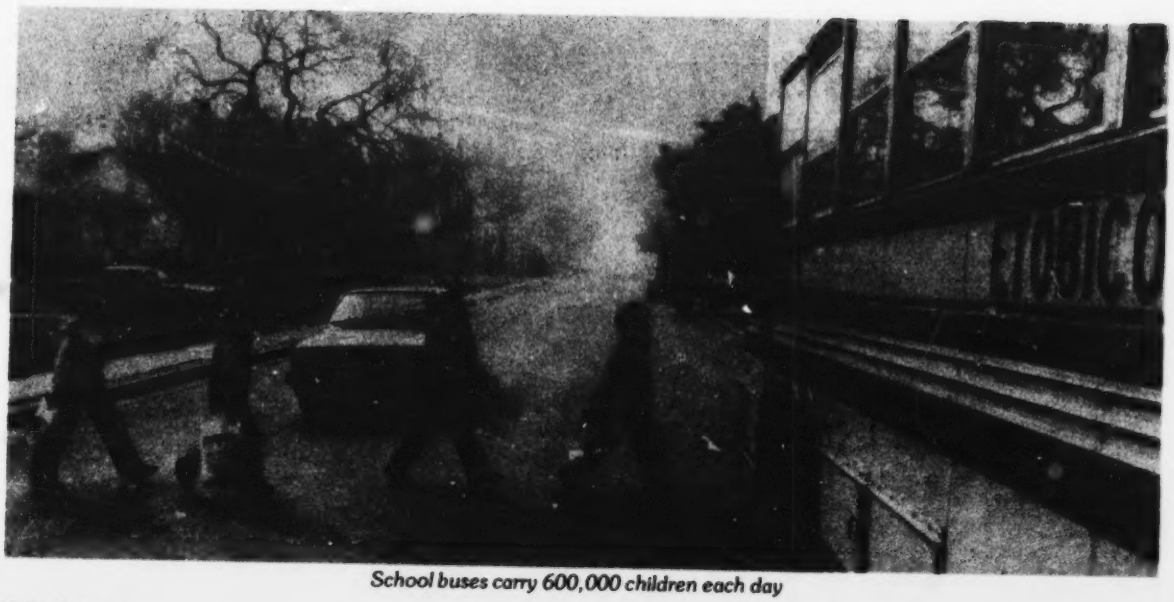
Current major project initiatives underway included the revamping of total driver systems (taking into consideration a planned move of a portion of the operation to Kingston in January, 1984) and developing a program-wide management reporting system.

Driver Licensing and Control Office

Day-to-day functions included driver licensing and post-licensing; maintenance and administration of the demerit point system; maintenance of all drivers' records; administration of licence suspensions; reinstatement of driving privileges; and a review of all drivers known to have medical or physical conditions.

1981

Licensed Drivers	5,123,177
Male	2,939,036
Female	2,184,141
New Drivers	241,175
Demerit Point System	
Warning at 2 to 8 point level	144,304
Interview at 9 to 14 point level	35,099
Suspensions at 15 or more point level	8,084
—First 15 point accumulation	6,968
—Subsequent 15 point accumulation	1,116
Suspensions at 6 or more point level (Probationary Drivers)	1,139
Suspensions for physical or medical reasons	1,923
Suspensions for drinking and driving	45,910



School buses carry 600,000 children each day

Vehicle Licensing Office

Eleven MTC offices and 310 appointed issuing agents serviced and controlled by the vehicle licensing office, completed a total of 7.4 million transactions including 500,000 new passenger car and truck registrations and 1.7 million permit transfers. Net revenue after agents' commission, expenses, and adjustments was $302 million.

Vehicle Control Office

Staff were responsible for the maintenance of all vehicle registration records and the provision of relevant vehicle registration information. They responded to 1.7 million enquiries.

The automated system handled 4,000,000 passenger, 900,000 commercial, 106,000 trailer and 114,000 motorcycle and moped registrations totalling 5.1 million. The remaining 200,000 consisted of snow vehicle and annual registrations handled manually.

Reciprocity and Prorate Office

Reciprocity and prorate office staff administered Ontario's participation in the Canadian Agreement on Vehicle Registration (CAVR). Commercial motor vehicles and buses are registered in accordance with CAVR for operation in member provinces. In 1981-1982 British Columbia, Alberta, Saskatchewan, Manitoba and New Brunswick implemented the agreement in conjunction with Ontario

1981 – 1982

Fleet Registrations	Plate 347 Host 477
	Total 824
Registrations & Amendments (Additions or Deletions)	6,978
Registration Fees	$5,766,253.62
Administration Fees	$ 87,971.90

Personnel was also responsible for administering existing and negotiating new reciprocal agreements for commercial registrations between Ontario and other North American jurisdictions. During the year agreements were signed with the States of Washington and Michigan. Negotiations took place with a number of other states such as South Dakota, Illinois and Maryland.

Transportation Regulation Development Branch

Staff was responsible for the program and policy development, planning and evaluation services required for the management of the ministry's Transportation Regulation program. The branch includes: planning and evaluation; vehicle standards; safety co-ordination and development; truck transportation; bus transportation offices.

Vehicle Standards Office

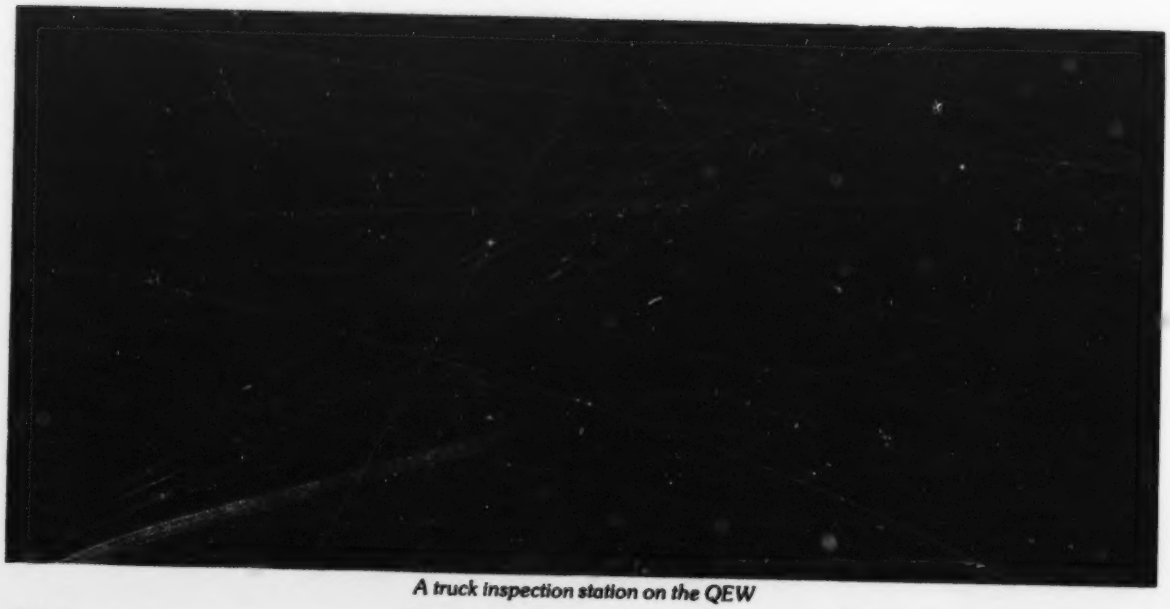
Personnel undertook investigation of potential changes to the existing policies and laws affecting drivers, vehicles, and the truck and bus industries. Work took place on a project basis and policy options were guided through various levels of approval.

Staff was also responsible for integration of transportation regulation program activities with the ministry processes for strategic and long-range planning. Development of an effective measurement and evaluation process for these program activities continued.

Planning and Evaluation Office

Personnel participated in the development of vehicle-related safety standards, legislation and regulations, and provided engineering expertise internally and externally in matters relating to vehicle design, safety standards and government control.

In addition, they investigated accidents in which vehicle condition may have been a contributory factor; recommended appropriate government action; and assisted the attorney general by providing expert witnesses at trials and coroners' inquests.



A truck inspection station on the QEW

Ontario Commission on Truck Safety

In October 1981, the Government of Ontario created the Ontario Commission on Truck Safety and appointed Dr. Robert Uffen the commissioner.

Assisted by a small informal advisory committee, Dr. Uffen is undertaking a thorough examination of all matters relating to the safety of trucking. Issues which relate primarily to economic regulation and the structure of the Ontario Trucking industry are not a part of the inquiry.

The commission scheduled a series of public meetings in eight major Ontario centres. Dr. Uffen's final report and recommendations are expected by the end of 1982.

Truck Transportation Office

In keeping with the ministry's move to modal responsibilities, this office was formed in December 1981. Previously named the highway carrier co-ordination office, it remained the single location within MTC where economic policies were developed in the field of truck transportation. Assistance was given to the prorate and reciprocity office in developing a new proposal on which bilateral reciprocity agreement with U.S. jurisdictions is to be based.

Staff continued to provide input into Canada-wide and international policies through participation in the various committees and working groups of the Canadian Conference of Motor Transport Administrators (CCMTA).

The transportation pricing function remained as part of the office mandate. Besides providing transportation pricing input into other ministry areas, particularly the other modal offices, the office continued to conduct a small business consultative program which assisted small business enterprises with transportation problems. Section staff also issued a newsletter 10 times per year advising 9,000 transportation users in the province on changes and new information which was to their business interest.

Bus Transportation Office

It was the responsibility of this newly-created office to develop programs, policies and legislation concerning intercity bus transportation in Ontario.

Staff duties influenced activities relating to the province's intercity bus transportation system, promoted and ensured maintenance and development of responsive and efficient intercity bus services to meet the needs of the travelling public, bus parcel express customers for transportation within Ontario, and between Ontario and other jurisdictions.

During the 1981-1982 fiscal year, personnel acted as secretariat to the public vehicles act review committee, and was responsible for the implementation in July 1981 of the revised charter-trip regulations under the PVA recommended to the minister by the committee. Through the CCMTA, the office was also active in interprovincial and federal deliberations relating to the intercity transportation of disabled passengers by bus.

Next fiscal year, it is anticipated the office will launch major policy development studies related to intermodel bus-rail relationships in the province's major travel corridors and to intercity bus services provided in small and/or rural communities.

Safety Co-ordination and Development Office

In support of the highway safety co-ordinator, staff carry out liaison work, strategic planning, and tactical development. Personnel provided assessment and advice on matters involving the government's approach to a highway safety target; fundamental principles, approaches and philosophies; safety outlooks and strategies; organizational tactics; program delivery tactics; and principles of road user motivation and behaviour. The office serves as secretariat to the interministerial safety planning group.

In support of operations of the transportation regulation program, staff conducted sub-program development planning, evaluation, and policy development, recommending specific safety initiatives and implementation and evaluation approaches. This office administered the secondary school driver education program and provided direction and liaison for the program's research and development support. Staff was also responsible for the validity and availability of accident data.

New tire regulations came into force during the year

Legislative Activity

Highway Safety

The Highway Traffic Act (HTA) was amended to provide increased measures of safety for the public: it allowed either owners or drivers of unsafe vehicles to be charged; changed standards for ramp-metering installations to make them more visible; prohibited passing on left shoulders of freeways and prohibited backing up on the roadway or shoulder of any highway divided by median strip on which the maximum speed is in excess of 80 km/hour.

An act relating to the transportation of dangerous goods was passed — to be implemented upon finalization of the required federal regulations.

The Motorized Snow Vehicles Act was amended to require drivers of such vehicles to stop when approaching or overtaking a school bus with flashing red signal lights.

Amendments were made to the regulations under the HTA to provide for: safety standards for vehicles used to transport physically disabled persons; a probationary driver licence program; minimum standards for load security tie down in the trucking industry; emergency parking only at selected locations of multi-lane highways.

Regulatory Reform

A number of changes were implemented during the year in the area of safety and regulation in accordance with the government's thrust for regulatory reform.

For example, under the HTA authority to designate the spring load weight restriction dates was delegated to MTC's regional directors for King's Highway or highway in territory without municipal organization, and to the municipal corporation having jurisdiction over the highway to which the designation applies.

Several regulatory changes in the PCV Act included: removal of duplication of administrative procedures for milk transporters; permission for any PCV carrier to transport bulk fertilizer during the peak season; provision of flexibility for agents of the Wheat Producers Marketing Board to transport its wheat; exemption of intercorporate trucking from provisions of the PCV Act.

Under the Motorized Snow Vehicles Amendment Act the value of reportable accidents was increased to $400 from $100.

Amendments were also made to the regulations under the HTA to allow a one-time registration fee for fire trucks; reduced brake-testing speeds to permit brakes to be tested on premises rather than roadways; expanded use of motor vehicle dealer plates; and to permit pick up trucks carrying camper units to take advantage of "personal use" registration fee.

PCV Act Review Committee

In May 1981, the minister announced the formation of a committee to review the PCV Act and to recommend new principles for the economic regulation of trucking in Ontario.

The committee is composed of 24 executive representatives of manufacturing, shippers, carriers, labour and government and chaired by the ADM Safety and Regulation who will report its recommendations by December 1982.

The objective is to update regulations first conceived in the 1920's, and make them compatible with the economic and trucking industry prospects for the 1980's and 1990's. A new PCV Act should support manufacturing, encourage flexibility and productivity, and be forward looking, simple, sensible and enforceable.

By the end of the fiscal year, the committee had completed a seven-month overview of the industry and its prospects, and was moving in the direction of switching the focus of government regulation away from direct control of the quantity or number of entrants towards direct control of the quality (fitness) of market entrants.

A chemical spill

Dangerous Goods Transportation Office

Staff provided co-ordination and acted as the focal point for Ontario government agencies, responding to national initiatives in the area of public safety in the transportation of dangerous goods.

Personnel participated in development of uniform (national) regulations for transportation of dangerous goods under the auspices of the Canadian Council of Motor Transport Administrators (CCMTA) which will form part of the Canadian code.

During the year, staff assisted in, and completed development of Ontario legislation to complement the Transportation of Dangerous Goods Act, Statutes of Canada, Chapter 36. The Ontario Act received Royal Assent in December of '81 providing the basis for adoption of the Canadian code for on-highway transportation in the province.

Staff also developed and negotiated a federal-provincial agreement to delineate jurisdiction and responsibilities for administration of the code. The agreement is being finalized for signing at the conference of the ministers responsible for Transportation and Safety, in Halifax, in September of '82.

Personnel also participated in seminars for shippers, carriers, and users of dangerous goods, sponsored by concerned Ontario industry associations, ensuring wide dissemination of information and awareness on the status and scope of the Ontario program, and furthered public safety.

Through participation in the inter-association task force on the transportation of dangerous goods, under the auspices of the Ontario municipal liaison committee, staff assisted Ontario municipalities in gaining an understanding of the federal and Ontario legislation, regulations and proposed associated legislative and administrative programs for ensuring public safety. The Task Force concluded with a comprehensive and widely distributed report.

Staff also developed posters and a pamphlet to raise the awareness and ability of the ministry's on-highway personnel to recognize and cope with the potential special hazards they may encounter. This included exposure to dangerous goods in-transit on Ontario highways, weigh scales and safety inspection stations. Staff, also provided technical and program information to industry, the media, public and ministry highway carrier enforcement people.

Currently staff is developing a comprehensive plan to co-ordinate Ontario's program.

Individual program components, such as the Ontario Dangerous Goods Transportation Act, the Federal-Provincial Agreement, elements of the awareness program and the on-highway enforcement staff training program were used to serve as models for use by the other provinces.

CLASS 4 — FLAMMABLE SOLIDS

Finance and Administration

Clerical staff are the backbone of the ministry

Services Division

Computer Systems Branch

Branch personnel advised MTC management on potential productivity improvements through automation while managing the resources necessary to develop and maintain automated systems, including: skilled staff; consultants; computer services arrangements; terminals and distributed processing equipment.

Systems co-ordinators help program managers identify systems opportunities and carry out feasibility studies. Personnel also offered systems development, maintenance and production services on a cost-recovery basis.

They were also responsible for development, monitoring and maintenance of MTC data processing policies, standards and procedures. Technology scanning in support of ministry and program strategic and long-range planning for automated information processing activities was a relatively new function.

Systems Planning Support

Office staff acted as an internal consultant to the branch and ministry in the areas of: technology scanning; strategic planning support; short and long range systems planning support; improved methods and techniques for systems development; standards and procedures in the systems development; standards and procedures in the systems area; systems quality assurance and performance measurement; and, distributed processing facility planning, tendering, implementation and maintenance.

Personnel also provided systems development and maintenance services for the ministry's research and communications activities. In the research area, an industrial economic forecasting system was implemented to indicate how various government spending strategies might affect economic sectors.

In addition, a resource management system was developed to aid policy planning and research executives in managing their resources and projects. In the communications area, computer support was provided to independent telephone companies to aid them in market analysis, plant depreciation analysis and accounting.

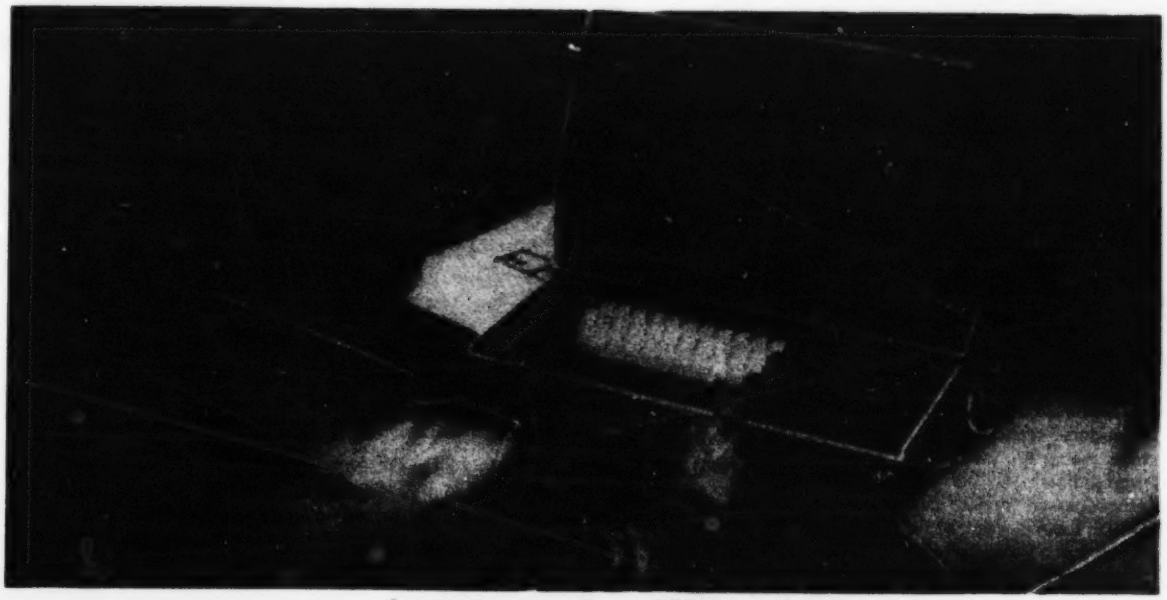
The Ontario communications information system continued to provide information on radio and TV facilities and audience characteristics to facilitate government policy deliberations.

Engineering Systems

About 50 operational systems were maintained in support of structural design, hydrology, road design and ministry transportation planning and traffic engineering activities — systems which supplement the production process in every facet of highway building and transportation planning.

Due to their universal application, several engineering computer programs were requested and given to other government agencies, municipalities and consultants to be run at local computer installations. The simplified transportation planning package was in use in most Canadian provinces and major projects completed were:

- Linear highway reference system which provided the common reference for the highway inventory, traffic volumes and traffic accidents;
- Ontario structures clearance and information system which provided the information for a reference manual, published annually;
- The road design system was enhanced with the following features:
  - traditionally intended for rural application, it can now be used for highways in urban areas, as well;
  - use of automatic plotters at the users' location in regional offices;
  - all data was displayed on screen "menus" and updated in a conversational mode with the computer if necessary.



Learning how to use the new VRS terminals

Management Information Systems Office

Personnel was responsible for development and support of systems which provided financial, administrative and operational data to MTC managers and staff. Some of the major systems included the operations management system, ministry financial systems, the performance budgeting system and the human resource inventory system.

The operations management system, which gathered much of the ministry's accounting information in the districts and regions, was modified to reduce system operating costs. A facility was added to capture the actual costs and work accomplished in highway maintenance.

Regional Liaison and Production Services

Staff was responsible for provision of the following services to all MTC users as well as municipalities and engineering consultants working on ministry projects: data conversion, technical control engineering and business plotting in support of operational MTC computer systems, security and back-up services for information and programs; acquisition and inventory control of peripheral computer equipment such as terminals, printers; system documentation library; and, liaison with the five regional offices in the area of operational systems needs.

Eighteen regional and district sites were in daily contact with head office at Downsview through a variety of data communication modes. MTC now has 560 computer terminals and this number increased rapidly.

Driver and Vehicle Systems

Staff from the two offices provided systems support for the safety and regulation program.

The former group supported the administration of the Ontario drivers system within the safety and regulation program. It was also responsible for minor support of system development for the Ontario Highway Transport Board, the Ontario Commission on Truck Safety, as well as internal and external research requests.

Most of the development activity concentrated around the restructuring and redesign of the drivers system to split the processing functions from a centralized environment in Downsview to one in which the input and error resolution procedures will mainly be done in Kingston.

Data base storage will remain centralized in Downsview as will much of the system reporting and all of the enquiry processing. It was the first phase of a major overhaul of the drivers system which could eventually see it become a distributed processing system providing a higher level of service to the general public.

During the past year, current driver record status was supplied through on-line enquiry facilities to thousands of visitors at the CNE who wished to review their own driving records.

Vehicle systems office staff continued to support the existing vehicle system. In addition, a development team was provided for the Vehicle Registration System Project (VRSP) which will result in a new system to be introduced in December, 1982, with the following innovations:

- "Plate-to owner" concept where the licence plate stays with the owner and is transferred from an old vehicle to a new one;
- "Staggered renewals" where the licence is renewed on the owner's birthday;
- "Flat fee" where a fixed licence fee is charged within a vehicle classification, e.g. passenger cars;
- Denial of registration for owners who have unpaid parking tickets or issued NSF cheques to the Crown.

The VRSP will be operated through a computer terminal network serving every licence issuing agent in the province. The objective: to provide more up-to-date and accurate information to agents, owners, the police and the courts.

Legal Services

This office is a law office within the Ministry providing legal services to the Minister and MTC staff. The legal officers are members of the Ministry of the Attorney General's staff seconded to MTC and located at head office and in each of the regions.

Staff provide legal advice on all aspects of the Ministry's programs and prepare the legal documentation through which such programs are carried out.

Legal office counsel provide Ministry representation before many administrative boards and tribunals with which MTC comes into contact and conducts prosecutions for offences under the Ministry's statutes.

Supply and Services Branch

General Services Office

The Government repair garage at Bay St. (Toronto) was responsible for the maintenance of government-owned sedans used by cabinet ministers and senior government officials, as well as providing a chauffeuring service for cabinet ministers and visiting dignitaries.

Tenders section staff maintained strict security over all tenders. Approximately 5,700 were received and processed for 920 contracts while some 1,800 contractors/suppliers attended public-tender openings.

In advertising, some 320 insertions were placed in the news media regarding tender calls and public notices. Direct cash sales of contract documents, various construction related manuals and MTC's contract bulletin produced a revenue of $94,000.

Instrument repair and test shop staff tested and repaired survey instruments and traffic recorders; conducted tests on some 2,000 components used in the 200-odd No. 170 microprocessors for traffic control, utilized throughout the province.

The accounting and asset control section was responsible for accounting functions for the repair garage and instrument repair and test shop; 3,100 work orders, valued at $425,000, were processed. The moveable asset control system was purged of a large number of lower value items and now consists of 43,000 items.

Record Services Office

Staff were responsible for providing assistance to MTC and the Ministry of Northern Affairs (MNA) in the efficient handling of records and information.

Policy and procedures for record retention and disposal were developed to suit current information requirements, using a file classification system, microfilm and centralized storage and protection of vital records. Disposal of over 11,000 cubic feet of records took place.

Library services staff provided information and library resources for MTC and the transportation community; acquired all publications and subscribed to periodicals and newspapers. Other services included: reference services, computer searches, interlibrary loans, publishing the "Library News" and "Journal Contents" a weekly announcement of Journals received. References exceeded 27,000.

Administration support section personnel provided office administration, typing and typesetting services for manuals and publications for a number of MTC offices. Control records for sale and distribution of publications and maps were also maintained while sales were routed through this office, regional and district offices.

An evaluation of the "Office of the Future" pilot project, set up in 1981 took place. This office provides administrative and clerical support services to the internal audit branch, special services office and Financial Management Office.

Additionally, word-processing services involving lengthy reports were provided for management improvement branch and transportation programs division.

New ergonomic applications to the office environment were introduced in the project, while personnel issues related to support staff concerns during transition to the new technology were addressed through the year and satisfactory response taken.

Impact of the project (i.e. services provided, productivity, benefits, user acceptance, etc.) will be assessed by senior management prior to any further extension of this concept within the ministry.

Purchasing and Supply Office

Purchasing section staff was responsible for the purchase of all construction and maintenance materials, and general ministry supplies, totalling about $74 million.

The vehicles and equipment section acted in the purchase of vehicles and equipment through standardization of specifications and consolidated purchasing for all Ontario Government ministries and agencies. Here purchases totalled approximately $44 million.

The stores section allowed MTC to take advantage of savings by bulk purchasing, also facilitating MTC's operational function by having materials available for later use. It also reconditioned and stored bailey bridge components for emergency use. Currently, there are 184 such installations in the province.

Field review and disposal office staff facilitated the disposal of all used ministry equipment surplus material and all Ontario Government motor vehicles, via public auction or tender. Sales totalled $2.9 million.

Graphic Services Office

Staff were responsible for the provision of a wide variety of commercial art, reprographic, offset printing and duplicating services in support of all ministry programs.

The graphic art and display section completed 234 requests for commercial art designs, (over 3,200 singular items) and participated with a display at exhibitions located in Thunder Bay, Ottawa, London, Peterborough, Kitchener, Lindsay, Simcoe, Kingston and Owen Sound. In addition, displays were provided for various functions at Queen's Park, the International Trade Centre, the Sheraton Centre and CNE.

More than 20,270 requests for reprographic services were processed for the provision of high quality, black-and-white and colour reproductions using photographic, diazo, screen processing and rapid turn-around photo copy methods. Approximately 17.3 million impressions were produced in the offset reproduction facility.

Administration of the MTC and MNA identification-card issuing program is also a responsibility.

Special Services Office

Staff were responsible for adminstration of a capital building program involving major building and space requirements, including office furnishings and equipment at head office, regional and district headquarters. They were also responsible for the provision of accommodation, telecommunications, office automation development services, postal services and instrument repair within MTC and admnistration of service centres on controlled-access highways.

Construction of the John Rhodes Driver Examination Centre neared completion while numerous projects involving new equipment installations were undertaken at head office, regional and district headquarters.

New police vehicles ready for delivery to OPP

Other areas of involvement included staff safety and building security systems, building refurbishing and maintenance.

A major proposal was approved in order to free up space for the expansion of the main computer facility. This was resulted in the redesign of approximately 8500^{m2} of office space involving some 500 employees.

Service Centres

Twenty-three service centres were in operation during the past year, nineteen on the MacDonald Cartier Freeway (401) and four on Highway 400. Revenue derived from the locations exceeded $4,900,000. Facilities and services, available at the centres on a 24-hour basis, included restaurants, washrooms, public telephones, first aid, fuel and lubricants, emergency towing, repair services and 21 picnic rest areas.

The upgrading of facilities for handicapped persons was completed at all service centres, providing access to all essential services such as parking, washrooms, restaurants, telephones and water fountains.

Outdoor information facilities were maintained at two centres, enabling the motoring public to access basic travel, lodging and local points of interest information on a 365-day 24-hour basis. Full service information booths were operated at 18 centres from mid-June up to and including the Labour Day weekend.

Over 500 individual inspections were conducted at ministry-affiliated service centres. This program provided coverage on all holiday weekends and most regular weekends. The co-operation of site management and staff resulted in a low level of customer complaints during the 1981-82 fiscal year.

The instrument repair and test shop provided a service to all regions, districts and head office staff. Staff was responsible for the repairs of sophisticated survey instruments, volume traffic survey recorders and miscellaneous electronic equipment. An evaluation was also carried out on these items prior to purchase. A charge-back system was initiated and recoveries were in excess of $200,000.

Tele-Communications

Telecommunication projects of a major nature initiated or reaching various stages of completion in the past year included multi-channel radio systems for Sault Ste. Marie (50 per cent completed), New Liskeard (90 per cent completed), Owen Sound District radio system survey (60 per cent completed).

Consulting and evaluation services were provided to 15 townships province-wide relative to the acquisition of ministry-subsidized mobile radio systems.

Negotiations with Ontario Provincial Police were conducted and a joint-use agreement on nine tower sites was approved for completion of the MTC Sault Ste. Marie radio system.

With regard to telephone communications facilities, an experimental interconnect electronic-key system was installed on the 6th and 7th floors of the West Tower at Downsview as part of the Office of the Future pilot project; initial evaluation showed a good level of satisfaction and acceptance by users.

A large number of telephone system re-configurations was completed for various branches at Downsview and Queen's Park and work related to telephone systems completed in various district and regional offices province-wide.

A new telephone system was installed in Bancroft District office utilizing MITEL 200 solid-state equipment that provied highly satisfactory with a high degree of user enthusiasm.

Again, the promotion of teleconferencing systems continued and an increase in frequency of use of the existing system was noted.

The last of the non-directional aeronautical radio beacons was installed at Webique (remote northern airstrip) and all further installations have been cancelled pending take-over negotiations with Transport Canada.

A notable increase in the installation of data circuits and computer-associated terminals took place and experimental circuits for colour video-conferencing were installed in the West Tower at Downsview.

The number of telecommunication work orders processed and completed during the year totalled 607.

Staff were also responsible for inventory control relating to the retrieval and distribution of ministry-owned office furniture and equipment.

MTC Mail

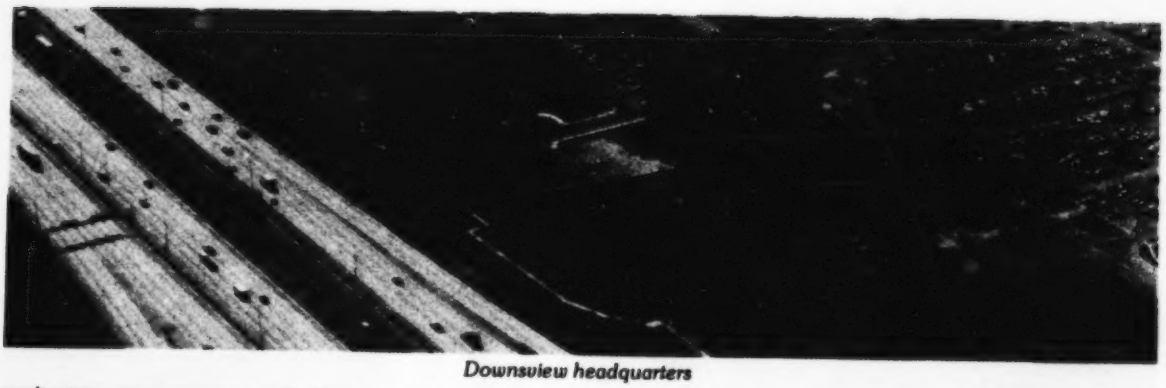
Personnel were responsible for incoming and outgoing mail handling, courier mail service to all regional and district offices and Downsview teletype centre activities. The handling of a heavy volume of licence plates, permits, drivers' licences and returned licence plates was also a responsibility.

Volumes of mail reached were: outgoing mail, 1,758,106; incoming mail, 3,906,985; teletype messages, 177,987; orders processed, 43,003.

Personnel in the material control unit were responsible for handling moves, deliveries of supplies, furniture, etc., processing orders and updating bulletin boards.

Volumes were: moves, 1,547; processing order, 145,314; deliveries, 3,358; bulletin boards, 2,657.

Administrative improvement section staff conducted 18 word-processing feasibility studies; 13 of the client areas completed the "implementation stage." The remaining five areas will complete implementation stage next year. Post-study involvement included selection and acquisition of word processing equipment, client training and the development and implementation of



Downsview headquarters

applications commensurate with client requirements.

The "applications development" stage of this process was designed to assist client areas in the development of time-saving applications utilizing word-processing equipment. One such area was the word-processing/Telecommunications facility installed in five MNA regional offices.

This application was designed to speed up the paperflow, reduce proofreading and decrease the turnaround time of ministers' letters. A total of five client areas have completed the "applications development" stage.

The Office of the Future pilot project was supported by the administrative improvement section, through the development of operational standards.

Property Office

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands and the quasi-legal aspects of the purpose of real estate in the title-searching and conveyancing functions are developed by this office staff.

Using guidelines, personnel in five regional offices negotiated 939 amicable property settlements while the ministry expropriated 251 properties to obtain title for land required to permit contracts to proceed. To ensure proper policies and procedures the office carried out two audits in each of five regional offices and, in addition, provided technical expertise when requested by regional staff.

Staff also had responsibility for resolution of all outstanding claims which may proceed to the Land Compensation Board for arbitration. The ongoing caseload involves about 85 properties with decisions handed down, or negotiated settlements procured in about 22 during the 1981-82 fiscal year.

Another major responsibility is to monitor and review property appraisals carried out by regional staff and fee appraisers. This involved some 178 desk reviews of which 35 were arbitration files. An additional 105 field reviews were carried out of which 20 were regional files, 35 were arbitration files and 50 were reviews of staff appraisal reports.

The ministry expended $17,179,400 in payment of compensation in acquiring title to lands required for highway projects. An additional $564,627 was paid to owners affected by expressways, subject to cost-sharing agreements between MTC and involved municipalities.

Revenue of $5,397,874 from the sale of surplus lands and $668,023 from leasing properties was received by the ministry.

The ministry's formal training program consists of courses involving appraisals and negotiations in which both MTC and MGS participated. In all, 57 staff members from these ministries attended the semi-annual advanced appraisal course.

Internal Audit Branch

Branch staff was responsible for MTC's audit activities and is also the appointed auditor-of-record for the Ministry of Northern Affairs. Under the general direction of the Deputy Minister, staff was segregated into the following three areas of responsibility to accommodate this function: operational audit, engineering audit, project and EDP audit.

Engineering Audit Office

This office, with staff located in five regional offices and head office, is responsible for auditing expenditures on ministry-owned and subsidized contracts.

Regional offices reviewed and analysed the adequacy of payment records for compliance with governing specifications, standards and regulations.

At head office, claims and design section staff was engaged in the auditing of ministry and contractors' records related to engineering claims in association with the engineering claims office. Values ranged to a high of $800,000. In addition, they analysed NTC contract price negotiations and conducted design audits to ensure adherence to the ministry's requirements.

Head office staff in payments and procedures groups, audited data in support of final ministry payment on capital and municipal contracts; reviewed and approved supplemental estimates of cost, which required audit certification prior to ministry approval; and sundry payment certificates to ensure validity and accuracy. Staff also lectured at various construction technical courses as well as conducting in-house training programs for development of engineering audit staff.

Throughout 1981-82, staff also performed special assignments, answered queries and provided assistance on engineering-oriented matters where their particular expertise was required. They also attended various meetings related to development and revision of construction specifications, standards and procedures.

Operational Audit Office

Personnel were engaged in the expenditure, revenue and operational review of the ministry's 18 district offices, five regional offices and head office administrative units, as well as some 300 private licence issuing agents throughout Ontario.

Staff also performed audits in municipalities throughout the province dealing with MTC-subsidized road, transit and municipal airport expenditures.

This function extended to cover such agencies as Toronto Area Transit Operating Authority (GO Transit), Ontario Telephone Services

Financial Planning and Administration Branch

Financial planning and administration branch personnel recorded, monitored and controlled ministry expenditures and revenues, in addition to providing advisory assistance and information for the management of financial matters. It acted as the liaison between MTC and central agencies, other arms of government and the public, in the area of finance and accounting. To carry out these responsibilities staff is divided among the four offices listed below:

Budgetary Planning and Control Office

Office staff were responsible for acting as a liaison with Management Board of Cabinet, Ministry of Treasury and Economics, other central agencies and for planning, evaluating, developing, controlling and analysing MTC's budget. It consists of three sections:

The budgetary development section was primarily involved in acquisition of funding and staff to produce MTC's annual expenditure budget. It co-ordinated preparation of the expenditure and revenue estimates submission, represented the ministry throughout the resources allocation process and developed the MTC's request for personnel and financial requirements in the ensuing fiscal year.

The budgetary control and analysis section personnel monitored expenditures and revenues, identifying deviations and developing financial options for resolution. It also provided support to program committees and program managers in the in-year management of financial resources.

Budgetary planning and evaluation section staff co-ordinated integration of the MBRs concept with MTC's existing management processes.

Financial Systems Office

Because of continuing financial constraint, it has become important that ministry managers have effective financial tools for evaluating current expenditures and forecasting future expenditures. It was the task of this office to assist in development and implementation of effective management of financial resources related to long-range planning, resource acquisition and allocation, financial analysis and evaluation, in-year monitoring and control, performance assessment and financial information and reporting. Office staff provided expertise in both computer systems and manual process fields to accomplish these objectives.

Chief Accountant's Office

This office was responsible for all those functions usually associated with a large accounting organization, e.g. payroll, accounts payable and receivable, maintenance of financial records and preparation of financial statements. **There were three key areas of responsibility:**

Expenditure office staff developed operational policies and procedures related to accounts payable, expense accounts, payroll and subsidies. It maintained and utilized procedures for the issuing and distributing of payroll cheques, processing of accounts payable data for the issuing of treasury cheques and the provision of expenditure information. It also monitored expense account data to ensure compliance with regulations and the provision of statistical information.

Personnel from the revenue control office developed operational policies and procedures related to revenue accounting and cost sharing. It processed and recorded accounts receivable data, funds and reconciles local bank accounts and monitors submission of funds to treasury.

Staff also established accounts receivables for shareable agreements made by the ministry, compiled, prepared and distributed all statistical financial documents related to MTC activities.

Accounting and Administration, head office staff provided a regional accounting function for all head office cost centres and MTC agencies, as well as the Ministry of Northern Affairs.

Qualification Control Office

Office personnel maintained and used procedures to ascertain contractors' abilities to meet ministry prequalification standards, initiating, developing and implementing improvements in methods of prequalification criteria and ratings and monitors claims made by contractors and their resolutions. They also mediated between sub-contractors and prime contractors on claims made under the MTC Creditors Payments Act.

Commission and Ontario Highway Transport Board, as well as specific programs concerning expressways and connecting links. During the fiscal year, audit procedures were also carried out on behalf of the Ministry of Northern Affairs, including the Ontario Northland Transportation Commission.

Project & EDP Audit Office

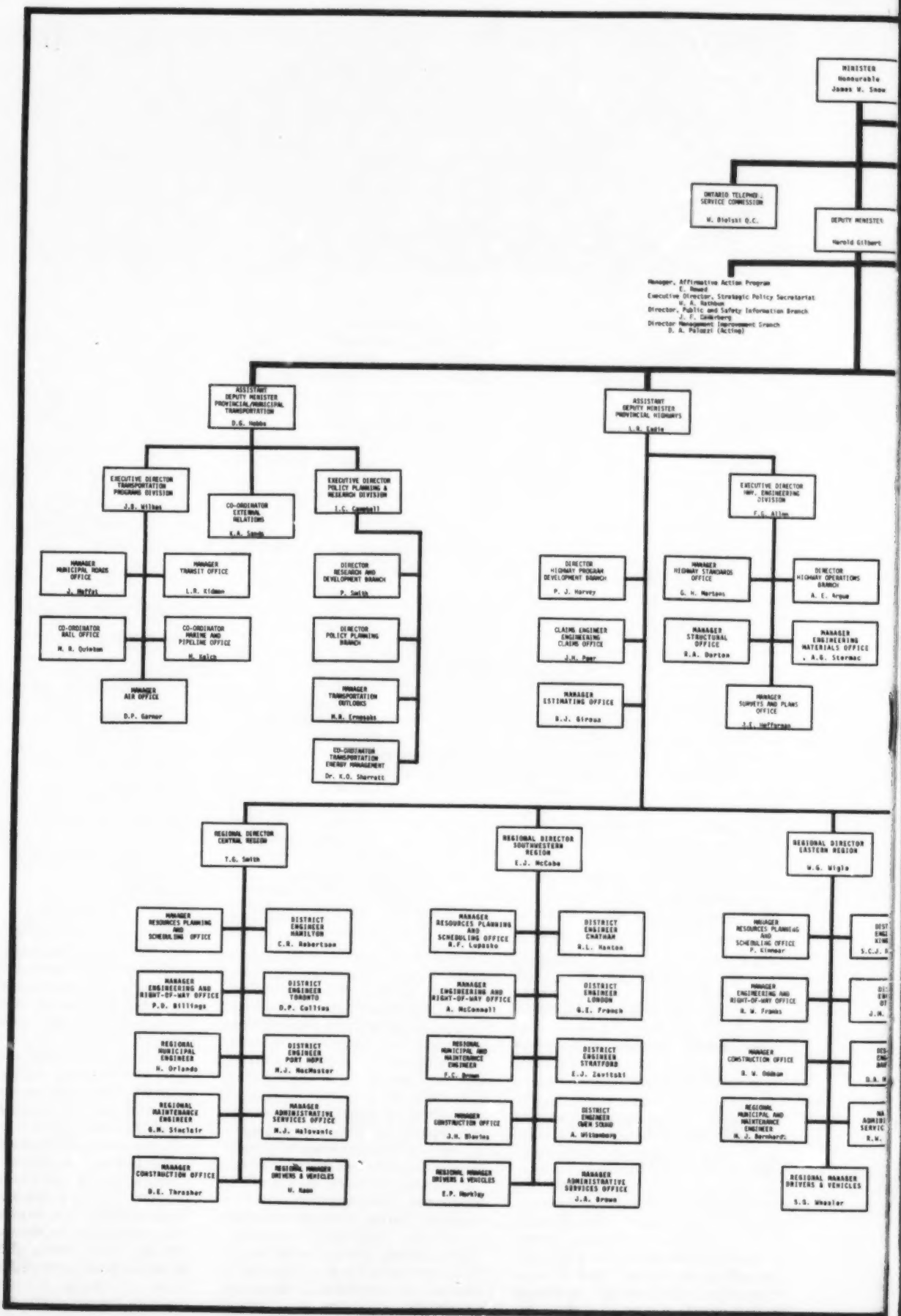
Audits of a complex and contentious nature were performed at the offices of crown corporations, utility companies, contractors, consultants, suppliers and the offices of various other private enterprises. They were performed against records relating to engineering claims from contractors, claims from crown corporations, extra costs on contract work, utility relocation charges, and special agreement work.

Major project audits were performed on the expenditures incurred by Urban Transportation Development Corporation on behalf of the development of light rail transit technology and hardware systems and the cost records of Canadian National Railway for the relocation of the proposed intermodal terminal in the Malton/Brampton area.

A number of audits of records of private enterprises were carried out as requested. Services were also provided to supply statistical information obtained from private enterprise to MTC personnel for the updating of material used in ministry contracts and agreements.

In 1981-82 staff also developed a comprehensive risk analysis of all MTC production computer systems. Some 100 active applications, in the various areas — financial, management control, planning, drivers/vehicles, engineering and communications — were identified and evaluated. This, together with further analysis of new systems, forms the basis of the long term ADP audit plan.

Two major computer systems, unclassified payroll, progress payment certificate, were also reviewed. In addition, the section also reviewed and commented on the development of new systems; vehicle registration (VRSP), driver study (DSRP) and operations management system.


MINISTER
Honourable
James W. Snow
ONTARIO TELEPHONE SERVICE COMMISSION
H. Bialski Q.C.
DEPUTY MINISTER
Harold Gilbert
Manager, Affirmative Action Program
E. Bound
Executive Director, Strategic Policy Secretariat
W. A. Mathews
Director, Public and Safety Information Branch
J. F. Emmerberg
Director Management Improvement Branch
D. A. Polazzi (Acting)
ASSISTANT DEPUTY MINISTER PROVINCIAL/MUNICIPAL TRANSPORTATION
D.G. Hobbs
ASSISTANT DEPUTY MINISTER PROVINCIAL HIGHWAYS
L.R. Eadie
EXECUTIVE DIRECTOR TRANSPORTATION PROGRAMS DIVISION
J.B. Wilson
CO-ORDINATOR EXTERNAL RELATIONS
K.A. Sands
EXECUTIVE DIRECTOR POLICY PLANNING & RESEARCH DIVISION
I.C. Campbell
EXECUTIVE DIRECTOR HWY. ENGINEERING DIVISION
F.G. Allen
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J. Moffat
MANAGER TRANSIT OFFICE
L.R. Kidson
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M. R. Quinton
CO-ORDINATOR MARINE AND PIPELINE OFFICE
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M.R. Ernyasha
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Dr. K.O. Sharratt
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REGIONAL DIRECTOR SOUTHWESTERN REGION
E.J. McCabe
REGIONAL DIRECTOR EASTERN REGION
W.G. Wigle
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MANAGER ENGINEERING AND RIGHT-OF-WAY OFFICE
P.D. Billings
REGIONAL MUNICIPAL ENGINEER
N. Orlando
REGIONAL MAINTENANCE ENGINEER
G.M. Sinclair
MANAGER CONSTRUCTION OFFICE
D.E. Thrasher
DISTRICT ENGINEER HAMILTON
C.R. Robertson
DISTRICT ENGINEER TORONTO
D.P. Collins
DISTRICT ENGINEER PORT HOPE
H.J. MacMaster
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H.J. Maloyanic
REGIONAL MANAGER DRIVERS & VEHICLES
W. Kaan
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R.F. Lupasko
MANAGER ENGINEERING AND RIGHT-OF-WAY OFFICE
A. McConnell
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F.C. Brown
MANAGER CONSTRUCTION OFFICE
J.H. Blevins
REGIONAL MANAGER DRIVERS & VEHICLES
E.P. Markley
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R.L. Hanton
DISTRICT ENGINEER LONDON
G.E. French
DISTRICT ENGINEER STRATFORD
E.J. Zavitski
DISTRICT ENGINEER OWEN SOUND
A. Wittenberg
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MANAGER CONSTRUCTION OFFICE
R. W. Gibbon
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R. J. Bernhardt
REGIONAL MANAGER DRIVERS & VEHICLES
S.G. Wheeler

Ontario

Ministry of Transportation and Communications

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Robert Eaton, M.P.P.

TORONTO AREA TRANSIT OPERATING AUTHORITY
L.H. Parsons

ONTARIO HIGHWAY TRANSPORT BOARD
B.D. Alexander Q.C.

Strategic Policy Committee

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M.H. Lavrijt-Smith

EXECUTIVE DIRECTOR COMMUNICATIONS DIVISION
D. R. Peebles

ASSISTANT DEPUTY MINISTER FINANCE & ADMINISTRATION
J.R. Barr

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C. R. Elliot

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J. L. Forster

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MANAGER HIGHWAY CARRIER LICENSING OFFICE
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G. M. Thomson

CO-ORDINATOR OPERATIONAL POLICY
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DIRECTOR COMMUNICATIONS OPERATIONS BRANCH
R. Bulgar

DIRECTOR TRANSPORTATION REGULATION DEVELOPMENT BRANCH
A. F. Burbidge

CO-ORDINATOR TRUCK TRANSPORTATION OFFICE
R. G. Summerley

DIRECTOR OFFICE OF LEGAL SERVICES
C.J. McCombe Q.C.

DIRECTOR COMPUTER SYSTEMS BRANCH
R. S. Pillar

DIRECTOR SUPPLY AND SERVICES BRANCH
R.J. Cartwright

MANAGER PROPERTY OFFICE
I. R. Chadwick

DIRECTOR INTERNAL AUDIT BRANCH
A. G. Kelly

DIRECTOR PERSONNEL BRANCH
I.J. Cowan

DIRECTOR FINANCIAL PLANNING & ADMINISTRATION BRANCH
F. E. Wood
(A. C. Lennox eff. Al 12 '81)

EXECUTIVE SECRETARY M.E.S.
J. G. Gray

MANAGER OCCUPATIONAL HEALTH AND SAFETY OFFICE
M. S. Stevens

REGIONAL DIRECTOR NORTHERN REGION
G.F. Wetherall

REGIONAL DIRECTOR NORTHWESTERN REGION
W.D. Hallipoutis

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DISTRICT ENGINEER HUNTSVILLE
D.A.O. White

MANAGER ENGINEERING AND RIGHT-OF-WAY OFFICE
A.J. Percy

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D.F. Barnes

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D. J. Armitage

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J. J. McNamara

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DISTRICT ENGINEER COCHRANE
A.E. Pettigrew

MANAGER ADMINISTRATIVE SERVICES OFFICE
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DISTRICT ENGINEER SUDBURY
H. K. Kirchner

REGIONAL MANAGER DRIVERS & VEHICLES
B. A. Edwards

MANAGER SYSTEMS AND RESOURCES MANAGEMENT

DISTRICT ENGINEER SAULT STE. MARIE
J. Sarcka

MANAGER ENGINEERING AND RIGHT-OF-WAY OFFICE
P. R. Bryar

DISTRICT ENGINEER THUNDER BAY
R.E. Thompson

MANAGER CONSTRUCTION OFFICE
W.A. Stewart

DISTRICT ENGINEER KENORA
C.C. Yuill

REGIONAL MUNICIPAL AND MAINTENANCE ENGINEER
F. Gendulic

MANAGER ADMINISTRATIVE SERVICES OFFICE
M. A. Rodbourne

MANAGER ACCESS ROADS OFFICE
L.P. Sherr

REGIONAL MANAGER DRIVERS & VEHICLES
A.A. Whitney

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1980	1981
7	Fail to register a vehicle	4,860	4,581
9(1)	False statement	77	75
9(2)	Fail to notify new address	2,380	2,009
10	Fail to have number plates	21,270	15,068
12	Violations as to number plates	4,211	2,959
13	Improper use of number plates	735	799
18(1)	No driver's licence or improper class	19,358	20,292
18(3)	Driving in breach of condition	0	409*
19	Fail to produce operator's licence	24,822	23,576
21(1) a,b,c,d,e	Driver licence violation	0	508*
22	Drive suspended in Ontario — Licence out-of-Province	0	19*
23	Operation of motor vehicle by person under 16	140	143
24	Driving motor assisted bicycle under 16	0	5*
30(2)	Unlawful possession of permit	22	14
30(3)	Unlawful possession of licence	181	118
35	Driving while licence is suspended H.T.A.	192	8,341
41	No garage licence	26	6
42	Record of wrecked vehicle violation	44	13
44	Improper light	11,099	11,056
46	Defective brakes	1,597	1,692
48	Faulty equipment (mirror, windshield, etc.)	475	445
52(1)	Defective — improper tires	0	41*
52(2)	Improper attachment on wheels	0	15*
55(1) a & b	Driver view obstructed	386	619
55(2)	Colour-coating obstructing view	0	108**
55(3)	Obscured interior colour-coated windows	0	419**
56(1) a & b	Windows obstructed	1,002	1,189
57	Excessive noise/smoke/fumes	22,020	18,176
58	No slow-moving-vehicles signs	86	62
61(2)	Radar warning device prohibited	797	754
62	Fail to have proper trailer attachments	919	1,027
65(2)	Unsafe vehicle	0	5
65(3)	Failing to submit to vehicle inspection	1,645	1,431
67	Drive unsafe vehicle	4,369	3,192
68(1)	Operate vehicle — fail to display device	0	835*
69	Affix vehicle inspection sticker not MTC issue	0	5*
71	Certificate of mechanical fitness violation	147	41
87	No name of owner on commercial vehicle	1,416	1,086
88	Drive/ride motorcycle no safety helmet	1,807	2,005
90(2)	Remove/modify/inoperative seat belt assembly	858	1,086
90(3)	Failure/improper use seat belt assembly — driver	51,744	67,242
90(4)	Passenger — failure to ensure seat belt use	7,640	9,307
90(6)	Driver — failure to ensure passenger seat belt use	404	622
92(1)(2)(5)(6)(9)	Excessive vehicle width/length	0	637*
93(7)	Special permit violation	1,808	1,700
93(1)	Overload in excess of permit	30	34
93(2)	Fail to produce commercial ownership permit	195	65
93(4)	Spring Regulations — Overload	1	18
94(1 & 2)	Overhanging load/improper loading	1,678	1,982
98(1) (1b)	Overweight — tires	0	9*
99(1)a	Overweight — Single axle (single tire)	0	120*
99(1)b	Overweight — Single axle (dual tires)	0	1,566*
99(1)c	Overweight — Dual axle	0	8,312*
99(1)d	Overweight — Triple axle	0	250*
99(2)	Overweight — Dual axle (single tire)	0	1*
99(3)	Overweight — Triple axle (single tire)	0	54*
99(4)	Overweight — Single front axle (no verification)	0	1*
99(6)	Overweight — Single front axle (exceed rating)	0	4*

*New method of recording in 1981
**New offence 1981

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1980	1981
100(a)	Overweight — Two axle group	0	58*
100(b)	Overweight — Three axle group	0	103*
100(c)	Overweight — Four axle group	0	47*
101(1)	Gross vehicle overweight	0	1,949*
101(2)(3)	Fail to produce/violate authority	0	13*
102(3)	Overweight during freeze-up	0	148*
103	Overweight on axle Class B highway	0	6*
104(1)	Overweight in excess of permit	0	4,069*
104(2)(5)	Fail to carry produce permit	0	1,508*
104(7)(8)	Overweight — March/April	0	127*
109	Speeding 50 km/h or more over the limit	12,046	10,326
109	Speeding more than 29 less than 50 km/h	98,175	94,221
109	Speeding more than 15 less than 30 km/h	297,554	293,806
109	Speeding under 16 km/h	378,509	384,088
111	Careless driving	20,510	19,358
113	Unnecessary slow driving	154	189
114	Fail to obey signal of police officer	304	365
115	Fail to yield right of way	172	213
116	Fail to stop at through highway	49,634	53,267
118	Fail to obey yield sign	595	716
119	Fail to yield — from private road	6,153	6,465
120	Pedestrian crossover violation by driver	4,900	4,538
121(1)	Improper right turn at intersection	2,315	0*
121(2)	Improper left turn at intersection	4,224	0*
121(3)	Improper left turn into intersecting highway	3,596	0*
121(4)	Improper left turn from one-way highway	1,190	0*
121(5)	Improper left turn into one-way highway	221	0*
121(6)	Improper left turn from one-way highway to one-way highway	661	0*
121(1)	Improper right turn	0	58*
121(2)	Improper right turn at intersection	0	2,729*
121(3)	Improper right turn — multi lane	0	4,827*
121(4)	Improper left turn — across path of approaching vehicle	0	4,510*
121(5)	Improper left turn at intersection	0	3,412*
121(6)	Improper left turn — multi lane highway	0	1,294*
122(1)	Fail to signal for turn	13,450	12,962
122(2)	Fail to signal-moving from parked position	3,109	3,225
122(4a) (4b)	Improper manual signal	1	8
122(5)	Improper directional signal	63	49
122(6)	Improper use of signaling device	82	82
122(7)(7a)(7b)	Fail to signal	109	102
123	Prohibited U-turns	328	238
124(5)	Disobey red signal light	45,165	48,364
124(7)	Disobey amber light	12,032	12,814
124(8)(9)(10)(11)	Flashing red-amber-green arrow	2,234	2,446
124(12)	Fail to give right-of-way to pedestrian	890	825
124(13)	Prohibited turn	23,478	23,705
124(25)	Disobey traffic signal	2	0
125(3)	Disobey portable lane control signal — red light	289	98
125(4)	Disobey portable lane control signal — amber light	73	28
126	Drive right side of multi-lane highway	265	257
127(1)(2)	Fail to share the road	2,216	2,289
127(3)	Fail to move to right	151	174
127(4)	Vehicle or horsemen overtaking others	394	450
127(5)	Horsemen or vehicles overtaking bicycles or tricycles	23	32
127(6)	Improper passing	24	30
127(7)(a)(b)	Improper passing	1,313	1,270
128	Driving left of centre of highway	1,664	1,651

*New method of recording in 1981

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1980	1981
129(1)	Passing to right of vehicle	27	26
129(2)	Unsafe passing to the right	3,480	3,155
130(1)	Fail to obey signs posted on paved shoulder	0	501**
132	Wrong way on a one-way street	6,495	5,766
133(a)	Unsafe lane change	5,773	5,676
133(b)	Drive in centre lane of three lane highway	176	210
133(c)	Fail to drive in slow moving traffic lane	3,988	4,472
135(a)(b)	Improper driving on divided highway	987	863
136(1)	Following too closely	15,645	15,409
136(2)	Following too closely in commercial vehicle	432	446
137(1)	Fail to yield to fire department vehicle, etc.	299	385
137(2)	Following a fire department vehicle	22	13
140	Crowding driver	383	678
141	Fail to stop for crossing (signal)	193	211
142	Drive through under or around railway barrier	202	289
143	Improper opening of vehicle door	384	293
144(1)	Improper approach or passing a stopped streetcar	167	130
144(2)	Pass streetcar on left side	40	29
145	Improper driving when approaching animals	0	2
146	Fail to use passing beam	1,143	1,049
147	Improper parking on highway	1,023	777
147(8)	No warning lights on commercial vehicle	14	32
147(9)	No flares	16	37
147(10)	Vehicle interfering with traffic	643	885
148	Racing	127	117
150(b)	Failure to stop school bus or public vehicle at railway crossing	18	26
151(5)(5a)(5b)	Fail to stop for school bus	2,615	2,260
151(6)	School bus: Fail to actuate signals	25	23
151(9)	Unlawful use of red signal lights on school bus	5	4
151(11)	School bus: Failure to cover signals and signs	19	21
152(3)	Fail to obey school crossing stop sign	91	128
156	Littering highway	1,541	1,223
159(2)	Fail to obey a direction sign	4,065	4,436
173	Fail to report an accident	3,468	4,166
174	Fail to remain at the scene of an accident	2,747	2,403
175	Fail to report damage to highway property	768	762
189a	Fail to stop for police	0	14**
	Others	32,773	17,042
	TOTAL	**1,268,653**	**1,293,706**

**New offence 1981

SUMMARY OF CONVICTIONS

Criminal Code	56,500	51,911
Highway Traffic Act	1,268,653	1,293,706
Regulation H.T.A.	12,253	11,171
Municipal Bylaws	20,349	29.204
Motor Vehicle Accident Claims Act	3,865	52
Compulsory Automobile Insurance Act	16,480	21,718
Public Commercial Vehicles Act	8,835	4,438*
Public Vehicle Act	0	2
TOTAL	**1,386,938**	**1,412,202**

*New method of recording in 1981

REGULATIONS UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1980	1981
484	School bus violation	5	51
469(14)(15) (16)(17)	Number plate violation	998	590
462(4)	Motorcycle violation	668	690
462(13)	Classified licence violation	312	221
462(19)	Fail to notify name/address change	4,052	2,637
462(20)	Fail to sign licence	0	761*
469(21)	Only single beam headlight	46	23
477(4)	Improper parking	89	144
494(2)	Prohibited use of studded tire	118	208
	Others	5,965	5,846
	TOTAL	**12,253**	**11,171**

CONVICTIONS REGISTERED UNDER THE CRIMINAL CODE (CANADA)

SECTION	OFFENCES	1980	1981
203	Criminal negligence causing death	16	20
204	Criminal negligence causing bodily harm	8	9
233(1)	Criminal negligene	141	155
233(2)	Fail to remain	2,060	2,097
233(4)	Dangerous driving	1,782	1,802
234	Drive ability impaired	18,944	21,099
24.1	Roadside	242	288
235(2)	Fail to take breathalyzer	3,035	3,450
236	Over .08 alcohol	20,593	22,219
238(3)	Drive while disqualified	9,679	772
	TOTAL	**56,500**	**51,911**

*New method of recording in 1981

CONVICTIONS REGISTERED UNDER THE MOTORIZED SNOW VEHICLES ACT

SECTION	OFFENCES	1980	1981
2(1)	Drive or permit to drive unregistered vehicle	13	125
2(2)	Fail to register	5	0
2(3)	Fail to provide evidence of issue of permit (no plate)	3	0
2(7)	Fail to display registration number	64	148
2(8)	Fail to display evidence of permit	119	242
3(1)	Make false statement	2	11
3(2)	Fail to notify change of address	5	5
3(3)	Fail to notify change of ownership	6	0
4	(Plate) — Registration number obstructed	0	0
4(2)A & B	Use defaced or altered plates	0	0
4(2)C	Improper plates	0	0
5	Drive on prohibited highway	35	55
6(2)	Drive in area not designated	0	6
7	Imroper crossing of roadway	1	0
7(1)	Person under age 16 drive on highway	0	0
7(2)	Permit person under age 16 to drive on highway	0	0
7(3)	No driver's licence	0	0
7(5)	Permit unlicensed person to drive	0	0
8(1)	No operator's licence	39	23
8(2)	Drive across highway no licence	7	5
11(1)	Operate (or permit operation) uninsured vehicle	115	219
11(2)	No insurance	0	0
11(3)	Fail to produce evidence of insurance	28	15
11(4)	Produce false evidence of insurance	1	0
12(1)	Fail to report collison	6	20
12(2)	Police officer fail to forward report of accident	1	0
13(1)	Speeding	9	26

CONVICTIONS REGISTERED UNDER THE MOTORIZED SNOW VEHICLES ACT

13A	Careless driving	15	44
14(1)	Fail to produce licence	15	36
15(1)	Improper muffler	0	0
16	Towing on serviced roadway prohibited	2	0
17	No helmet	72	95
22	Trespassing (no written permission)	6	0
24(3)	Disobey signs on highway or public trail	6	4
	Others	36	65
	TOTAL	**733**	**1,144**

REGULATIONS (MOTORIZED SNOW VEHICLES ACT)

SECTION	OFFENCES	1980	1981
2	Disobey police officer	0	0
3	Fail to yield to vehicle on right	3	2
4	Disobey sign	12	15
5(1)(b)	Fail to yield — from adjoining property	0	0
5(2)	Improper crossing of roadway	0	0
6(3)	Improper left turn	0	0
7(1)	Fail to signal	1	0
7(2)	Fail to signal from stop position	0	0
7(3)	Improper signal	0	0
7(4)	Fail to signal stop	0	0
8(a)	U-turn-no clear view	0	0
8(b)	U-turn railway crossing	0	0
8(c)	U-turn on hill-no clear view	0	0
9	Disobey traffic signal light	2	1
10(1)	Fail to share roadway	0	0
10(2)(b)	Passing when roadway not clear	1	1
11	Drive left of centre	3	2
12	Pass on right — not in safety	0	0
13	Following too closely	0	0
14(1)	Fail to stop at railway crossing	0	0
14(2)	Cross railway improperly	0	0
14(1)(a)	Park on roadway	0	0
16	Speeding	0	0
17	Careless Driving	2	3
19(a)	Drive on Kings Highway (prohibited)	0	0
20	Improper lights	0	0
21	Improper or no lights	2	1
	Others	7	5
	TOTAL	**33**	**30**

CRIMINAL CODE OF CANADA (MOTORIZED SNOW VEHICLES)

SECTION	OFFENCES	1980	1981
233(2)	Fail to remain	0	0
233(4)	Dangerous driving	0	0
234	Impaired Driving	9	5
235(2)	Fail to take breathalizer	0	1
236	Over .08 alcohol	0	2
238(3)	Drive while disqualified	0	0
	TOTAL	**9**	**8**

MUNICIPAL BYLAWS (MOTORIZED SNOW VEHICLES)

SUMMARY OF CONVICTIONS (MOTORIZED SNOW VEHICLES)

Motorized Snow Vehicles Act	733	1,144
Criminal Code of Canada	9	8
Regulations	33	30
Bylaws	0	0
TOTAL	**775**	**1,182**

SUSPENSIONS

COURT ORDERED SUSPENSIONS H.T.A.	1980	1981
Careless driving	550	342
Speeding over 30 mph (50 kmh)	152	219
Racing	16	11
Fail to remain	131	151
Drive while licence is suspended (H.T.A. Section 35)	3	1142
Mandatory suspension H.T.A. effective 19/11/81 (Section 35)	0	901
Fail to stop for police (189a)	0	7**
Others	23	89
TOTAL	**875**	**2,862**
DEMERIT POINT SYSTEM SUSPENSIONS		
6 & 15 demerit point accumulation	13,246	9,223
Fail to attend interview	1,280	1,031
As a result of interview	467	634
TOTAL	**14,993**	**10,888**
DISCRETIONARY SUSPENSIONS (H.T.A. – SECTION 30)		
Medical or physical condition	1,810	1,923
Operating record	3	1
TOTAL	**1,813**	**1,924**
SUSPENSION FOR:		
Motor Vehicle Accident Claims	4,234	2,776
Failure to pay judgment	1,286	1,123
Default in payment of traffic fine	63,463	66,002
TOTAL	**68,983**	**69,901**
MANDATORY SUSPENSION H.T.A. FOR CRIMINAL CODE OFFENCES		
Criminal negligence	164	182
Dangerous driving	1,738	1,783
Impaired	18,677	20,776
Failure to provide breath sample	2,998	3,386
Blood/alcohol .08	20,224	21,748
Fail to remain at scene	2,027	2,048
Drive while disqualified	9,600	768
Fail to provide (RDSI)	227	273
TOTAL	**55,655**	**50,964**
TOTAL OF ALL SUSPENSIONS	**142,319**	**136,539**

DEMERIT POINT SYSTEM	1980	1981
DRIVER IMPROVEMENT ACTIONS		
Advisory letters issued	164,417	144,304
Interviews conducted	38,904	35,099
SUSPENSIONS		
Drivers who reached suspension level through point accumulation (15 points)	13,246	6,968
Drivers who reached suspension level through point accumulation (6 points)	0	1,139**
Drivers who reached suspension level through point accumulation — (second accumulation)	1,905	1,116*
Drivers suspended for failure to attend interview	1,280	1,031
Drivers suspended as a result of unsatisfactory interview	467	634
Total suspensions under point system	14,993	10,888

SUSPENSIONS

DRIVER MEDICAL REVIEW		
Total Cases Reviewed	77,035	89,663
Satisfactory Reports	75,198	86,085
Ur satisfactory reports as to class	710	2,604
Totally unsatisfactory	1,127	974
New Medical Waiver Programme (Effective March 1981)		
Waivers Granted	0	126
Waivers Denied	0	36
DRIVER OPTOMETRICAL REVIEW HIGHWAY TRAFFIC ACT		
Total Cases Reviewed	3,917	4,170
Satisfactory vision reports filed	1,232	1,495
Drivers required to wear prescribed lenses while driving — no previous restriction	2,464	2,377
Unsatisfactory vision reports	221	298

*New method of recording in 1981
**New probationary driver licensing system — June 1981

DRIVER CONTROL STATISTICS 1981 SUMMARY

	1979	1980	1981
NUMBER OF LICENSED DRIVERS IN ONTARIO	4,858,351	4,993,531	5,123,177
CONVICTIONS RECORDED IN RESPECT TO THE OPERATION OF:			
Motor Vehicles	1,440,473	1,386,938	1,412,202
Motorized Snow Vehicles	1,900	775	1,182
TOTAL	**1,442,373**	**1,387,713**	**1,413,383**
TOTAL DRIVER LICENCE SUSPENSIONS APPLIED	**144,826**	**142,319**	**136,539**
MEDICAL AND OPTOMETRICAL REVIEWS CONDUCTED	**43,334**	**80,952**	**93,833**

Trends in Motor Vehicle Accidents

Death and Injury Rates Over the Period 1972-1981

Between 1972 and the end of 1981, Ontario's population and the number of licensed drivers, motor vehicle registrations and motor vehicle accidents (with the exception of the years 1976, 1978 and 1980) were all on the rise. During the past ten years, traffic deaths reached a high of 1,959 in 1973 and declined to a low of 1,420 deaths in 1977.

In the past year, the number of deaths decreased 4.2 per cent from the 1,508 deaths in 1980 to 1,445 deaths in 1981. The population grew from 8.57 million to 8.63 million. The death rate per 100,000 population decreased to 16.8 from 17.6 last year. The death rate over the past ten years ranged from 24.7 to 16.8. The 1981 death rate of 16.8 is the same and the lowest as in the year 1946 at which time the population was 4.09 million.

There was a decrease of 1,046 persons injured, from 101,367 in 1980 to 100,321 this year. The 1981 injury rate per 100,000 population decreased to 1,163.1 from 1,182.8 in 1980.

Last year, the number of motor vehicle accidents reported totalled 198,372 an increase of 1.0 per cent against the 1980 total of 196,501. However, there were decreases of 4.8 per cent in fatal accidents and 4.2 per cent in persons killed. The personal injury accidents and persons injured decreased slightly by 0.1 per cent and 1.0 per cent respectively.

The motor vehicle accident rate per one million kilometres travelled increased this year to 2.8 and the fatal accident rate per 100 million kilometres travelled remained the same as the previous year i.e. 1.7. The death rate per 100 million kilometres travelled decreased from 2.1 in 1980 to 2.0 this year. The 1981 death rate of 2.0 is the lowest since 1955.

The number of kilometres driven in 1981 was estimated at 70,905,834,000 a decrease of 2.2 per cent from the 1980 figure of 72,419,477,000. This is the first decrease in kilometres driven during the past 25 years.

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Lancaster-Windsor	4,595,713	4,032,392
3	Fort Erie—Windsor	5,339,438	2,186,940
4	Port Stanley—(Creemore)	87,357	1,264,222
5	Toronto—Paris	4,730,262	687,231
6	Hwy. 24—Tobermory	7,616,861	2,733,950
7	Ottawa—Sarnia	7,778,222	4,156,338
7A	Hwy. 115—Hwy. 12 (Manchester)	31,620	242,938
7B	Peterborough—Chemung Corners	47,531	77,847
8	Winona—Goderich	1,986,471	738,201
9	Hwy. 11—Kincardine	22,762	1,409,023
10	Port Credit—Owen Sound	280,766	1,108,166
11	Toronto—Rainy River	27,655,642	9,650,969
11B	At New Liskeard	102,419	70,381
12	Whitby—Midland (7)	1,082,761	974,475
14	Bloomfield—Marmora	7,374,095	279,584
15	Kingston—Carleton Place	117,455	570,777
16	Johnstown—Ottawa	1,833,576	505,250
17	Quebec Boundary—Manitoba Boundary	25,217,984	9,344,512
17B	At North Bay		5,032
18	Leamington—Windsor	5,856	262,706
19	Port Burwell—Tralee	48,036	601,798
20	Niagara Falls—Hamilton	193,573	392,823
21	Hwy. 3 (Morpeth)—Owen Sound	2,641,928	1,329,705
22	London—Hwy.7		226,807
23	Hwy. 7—Hwy. 9 Teviotdale		492,269
24	Hwy. 59—Collingwood	4,612	1,071,972
24A	Paris—Galt		42,674
25	Oakville—Hwy. 89	369,204	545,542
26	Barrie—Owen Sound	1,644	617,538
27	Toronto—Penetanguishene	715,383	1,077,362
28	Port Hope—Bancroft	150,953	628,645
29	Brockville—Arnprior (15)	518,053	426,280
30	Brighton—Havelock	171,030	231,918
31	Morrisburg—Ottawa	248,263	458,377
32	Gananoque—Hwy. 15	10,056	74,133
33	Kingston—Stirling	1,947,946	521,080
34	Hwy. 2 (Lancaster)—Hawkesbury	2,195,380	361,279
35	Hwy. 401 (Newcastle)—Dwight	267,877	813,194
35A	Fenelon Falls—Hwy. 35		15,387
36	Burleigh Falls—(Hwy. 7)	60,799	326,409
37	Belleville—Hwy. 7 (Actinolite)	741,857	176,205
38	Kingston—Hwy. 7 (N. of Sharbot Lake)		319,823
40	Blenheim—Sarnia	1,164,641	424,304
41	Napanee—Pembroke	48,917	950,010
42	Brockville—Westport (29)	17,873	212,668
43	Alexandria—Perth	170,240	881,749
44	Hwy. 17—Hwy. 29 (Almonte)		91,424
45	Cobourg—Norwood		258,844
46	Hwy. 7 (E. of Manilla)—Bolsover	16,041	124,201
47	Hwy. 48 (N. of Hwy. 7)—E. of Hwy. 12		320,167
48	Toronto—Hwy. 35 (Coboconk)	101,179	742,366
49	Picton-Hwy. 401 (W. of Desoronto)		92,463
50	Toronto—Hwy. 89	19,961	416,176
51	Rondeau Prov. Park—Jct. Hwy. 3		23,221
52	N. of Hwy. 97S—Hwy. 2	1,129	197,715
53	Hamilton—Hwy. 2 (Eastwood)	204	366,266
54	Cayuga—Cainsville		283,425
55	Hwy. 401—Niagara	3,862	89,874
56	Hct. Hwy. 3—Jct. Hwys. 53 & 20		130,995
58	Port Colborne—St. Catharines	111,320	236,058
58A	Port Colborne (Hwy. 58 to Jct. Hwy. 14)		13,855

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
59	Long Point—Shakespeare	554,765	562,578
60	Hwy. 17 (W. of Renfrew)—Huntsville	4,090,476	1,198,274
61	International Bdry.—Thunder Bay		220,628
62	Hwy. 14 (N. of Belleville)—Pembroke	2,730,803	1,102,552
63	North Bay—Quebec Border	11,532	327,318
64	Sturgeon Falls—Hwy. 11	1,388,955	643,770
65	Quebec Border—Matachewan	1,260,848	466,248
66	Quebec Border—Hwy. 65	1,663,220	427,844
67	Iroquois Falls—Hwy. 101	569,837	142,369
68	Hwy. 17 (Espanola)—S. Baymouth		54,513
69	Hwy. 12 (N. of Brechin)—Capreol	1,229,444	1,391,910
69B	Parry Sound	650	
70	Springmount—Hepworth		74,616
71	Fort Frances—Hwy. 17 (E. of Kenora)	200,594	517,035
72	Hwy. 17 (Dinorwic)—Sioux Lookout	2,817,545	190,583
73	Port Bruce—Dorchester	1,273	194,553
74	Hwy. 3 (New Sarum—Nilestown	2,273	110,957
76	Hwy. 3 (EAgle)—Hwy. 2	134	82,702
77	Leamington—Hwy. 401 (N. of Comber)	82,830	89,757
78	Hwy. 21 (Dresdan)—Wallaceburg		59,578
79	Hwy. 2 (Bothwell)—Hwy. 7	12,963	181,303
80	Hwy. 2 (S. of Glencoe)—Courtright		325,522
81	Delaware—Grand Bend	192,138	426,290
82	Hwy. 7 Jct.—Hwy. 24	4,234	33,096
83	Hwy. 23 (Russeldale)—Hwy. 21	3,817	206,934
84	Hensall—St. Joseph	3,952	86,933
85	Kitchener—Elmira	213,707	
86	Guelph—Amberly	1,680,582	613,265
87	Harriston—Hwy. 86 (Bluevale)	3,118	169,067
88	Bardford—Hwy. 27 (Bond Head)		48,258
89	Hwy. 11—Hwy. 23 (E. of Palmerston)	802,985	628,176
90	Barrie—Angus		121,560
91	Stayner—Duntroon		41,461
92	Elmvale—Wasaga Beach		67,314
93	Hwy. 11 (E. of Barrie)—Waverley		207,737
94	Callander—Hwy. 17 (S. of North Bay)		42,543
95	Alexandria Point-Wolfe Island	17,852	46,434
96	Port Metcalf—W. End of Wolfe Is.	122,074	146,650
97	Hwy. 6 (Freelton)—Hickson	131,711	106,760
99	Dundas—Hwy. 24 (N. of Brantford)	26,258	200,898
100	Jct. Hwy. 401 to London	17,977	19,497
101	Quebec Border—Hwy. 17 (Wawa)	1,704,479	1,882,899
102	Thunder Bay—Sistonens Corners		119,298
105	Hwy. 17—Red Lake	99,995	489,288
106	Hwy. 28 (Dale)—Hwy. 2 (Welcome		20,335
108	Hwy. 17—Hwy. 639 (Quirke Lake)	49,587	186,319
112	Hwy. 11—Hwy. 66 (Swastika)		97,954
115	Newcastle—Peterborough	101,851	273,686
117	Jct. Hwy. 11—Jct. 35	7,972	195,154
118	Hwy. 11—Hwy. 169	80,668	469,905
121	Hwy. 28—Hwy. 35 (S. of Fenelon Falls)	117,934	567,220
124	Sundridge—Parry Sound	3,697	336,630
125	Hwy. 105—Red Lake		36,523
126	Hwy. 401—Hwy. 2 (London)	9,938	57,490
127	Maynooth-Hwy. 60 (E. of Whitney)		155,944
129	Thessalon—Chapleau	103,723	1,169,702
130	Port Arthur—Hwy. 61	13,294	47,605
132	Renfrew—Hwy. 41	70,462	121,219
133	Hwy. 33 (Millhaven)—Hwy. 401		42,638
134	Jct. Hwy. 7—Jct. Hwy. 28 (Lakefield)	163	73,642
135	Hwy. 401—Hwy. 2 (London)		33,081
136	Hwy. 24—Orangeville		83,691
137	Hwy. 401—Thousand Island Bridge		26,069
138	Cornwall—Monkland	6,730	252,411

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
140	Hwy. 3 (Port Colborne)—Hwy. 20	7,820	82,366
141	Hayes Corners Hwy. 69—Jct. Hwy. 11	2,779,540	225,775
144	Sudbury—Hwy. 101	56,360	1,302,793
169	Jct. Hwy. 12 to Jct. Hwy. 69	798,649	212,256
400	Toronto—Hwy. 12 (Coldwater)	14,916,204	2,547,530
401	(MCF) Quebec Border-Windsor	27,080,361	13,773,230
402	Hwy. 7—Blue Water	21,200,118	802,334
403	Burlington—Brantford	25,272,919	1,312,220
404	Toronto—Hwys. 7 & 12	8,430,621	199,757
405	QEW—International Br. (Queenston)	107,015	160,780
406	Hwsy. 20-58—QEW	15,986,013	150,927
407	Jct. Hwy. 401 to Jct. Hwys. 35 & 115	1,937	
409	Belfield Exway Hwy. 401—International Airport	2,266	336,329
410	Hwy. 401—Jct. Hwy. 7 & 10	91,113	93,611
416	Jct. Hwy. 2—Johnstown to Ottawa	2,950	
417	Quebec Boundary—Ottawa	4,081,105	2,618,111
420	QEW—Rainbow Bridge (Niagara Falls)	3,388	78,865
427	QEW—Hwy. 401	1,790,083	793,900
451	(QEW) Toronto—Fort Erie	8,751,875	5,892,019
458	Ottawa Queensway	3,285	
	TOTAL KING'S HIGHWAYS	261,421,414	105,806,924

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
500	Hwy. 41 (Denbigh)—Bancroft	1,144,794	435,432
502	Dryden—Hwy. 17	37	468,357
503	Tory Hill—Kirkfield	1,607,439	573,575
504	Hwy. 620—Apsley		103,695
505	Hwy. 46—Uphill	550	92,877
506	Plevna—Hwy. 41	139,179	138,124
507	Hwy. 28 (Lakefield—Hwy. 503	30,758	265,747
508	Burnstown—Black Donald Mines	32,490	219,417
509	Hwy. 7—Snow Road Station	439,310	216,340
510	Magnetawan—Hwy. 124		12,730
511	Brightside—Hwy. 508	1,663,726	212,481
512	Eganville—Hwy. 60	10,281	191,591
513	Hwy. 132—E. of Hyndford		65,213
514	Hwy. 500—Hwy. 515		127.259
515	Hwy. 512—Combermere	31,794	182,611
517	Twp. Road (near New Carlow)—Hwy. 62		61,974
518	Sand Lake—Hwy. 69	358,479	425,615
519	Hwy. 121—Redstone Lake	182,126	197,760
520	Burk's Falls—Ardberg	143,834	232,214
522	Hwy. 11—West of Loring	84,102	492,993
523	Lyell Twp. Line—Hwy. 60	311,100	81,416
524	Hwy. 522—Hwy. 534 (E. of Restoule)		22,871
526	Hwy. 69—W. of Britt	7,146	63,895
527	Jct. Hwy. 11 & 17 Northerly	577,236	960,340
528	Wolseley Bay—Hwy. 64	518,736	82,364
528A	Pine Cove Landing—Hwy. 528		38,344
529	Hwy. 69—Hwy. 69 (Magnetawan River)	6,043	165,904
529A	Hwy. 529—Bayfield Wharf	20,519	55,757
531	Bonfield—Hwy. 17		17,384
532	Hwy. 11 (S. of Bracebridge)—Hwy. 69		62,884
533	Mattawa—Hwy. 63	23,178	595,921
534	Powassan—Restoule	69,120	221,799
535	Hwy. 64—Riviere Veuve		260,718
537	Hwy. 69—Hwy. 17 (Wahnapitae)		119,003
538	Algoma Miners Loop		33,313
539	Hwy. 64—Warren	706,963	309,357

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
539A	Hwy. 539—Tert. Road 805		32,406
540	Little Current—Meldrum Bay	195,230	687,763
540A	Hwy. 540—Barrie Island	112,486	60,449
540B	Manitoulin Island	10,434	
542	Hwy. 68—Gore Bay	138,626	348,782
542A	Hwy. 542—Tehkummah		54,513
546	Hwy. 17—Mississagai Prov. Park		627,122
547	Hwy. 101—Hawk Jct.		23,732
548	Around ST. Joseph Island—Hwy. 17	256,592	326,920
549	Lake Panache—Hwy. 17	2,199,015	54,513
550	Sault Ste Marie—Gross Cap	2,026	39,385
551	Province Bay—Hwy. 540		109,026
552	Hwy. 556—Twp. Road (E. of Hwy. 17)	525,575	77,488
553	Massey-Bull Lake Lodge		243,664
554	Hwy. 546—Hwy. 129		88,771
555	Magog Lake—Hwy. 557		52,578
556	Hwy. 17 (Heyden) N. Easterly	651,006	478,204
557	Blind River Northerly		102,078
558	Haileybury—Montreal River	49,591	85,827
559	Hwy. 69 Nobel—Hwy. 69		93,755
560	Hwy. 11—Hwy. 144 (S. of Gogama)	887,082	954,005
560A	Westree—Hwy. 560		36,567
561	Bruce Mines—Hwy. 638		94,891
562	Hwy. 11 (E. of Thornloe)—Hwy. 65	14,741	49,387
563	Batchawana—Hwy. 17	227,227	23,322
564	Blanche River Bridge—Hwy. 112		43,147
565	Pte Aux Pins—Hwy. 550		6,254
566	Matachenan—Ashley Mine		104,390
567	E. of Silver Centre—N. Cobalt		145,952
568	Hwy. 11—Kenogami		15,384
569	Hwy. 11—Hwy. 11 (S. of Englehart)	37,816	187,928
570	Sesekinoko—Hwy. 11		12,126
571	Hwy. 562—Earlton	976,753	26,454
572	Hwy. 11 Ramore—Hwy. 101	764,105	63,952
573	Charlton—Hwy. 11		89,163
574	Cochrane—Norembega		183,222
575	Jct. Hwy. 17—Jct. Hwy. 64	3,465	100,479
576	Hwy. 101—Kam-Kotia Mine		104,165
577	Hwy. 101—Iroquois Falls	2,133	108,931
578	Iroquois Falls—Hwy. 11		36,672
579	Cochrane—Gardiner	3,155	177,853
580	Hwy. 11—Lake Nipigon	54,386	44,052
581	Hwy. 11—Remi Lake		48,501
582	Hwy. 11 & 17—Loop at Hurkett		22,736
583	Mead—Lac Ste Therese	10,522	240,850
584	Hard Rock Mine—Nakina	2,586,957	245,920
585	Hwy. 11—Pine Portage	172,054	127,894
586	Hwy. 11—Lower Shebandowan Lake		18,828
587	Silver Islet—Hwy. 11 & 17	16,731	356,587
588	Stanley—Round Lake Road	723,039	221,524
589	Hwys. 11A & 17A—Dog Lake Road	193,826	251,281
590	Hwy. 130—Hwy. 588 (Nolalu)		92,985
591	Hwy. 589 Northerly		29,204
592	Hwy. 11 (Novar)—Hwy. 11	3,324	69,724
593	Hwy. 61—Hwy. 588 (Nolalu)		174,788
594	Dryden—Hwy. 17	329,903	120,728
595	Hwy. 597—Hwy. 590	270,080	139,974
596	Kenora—N. of Minaki	6,909,080	630,943
596A	Kenora	461,233	
597	Pardee—Hwy. 608		61,619
598	Hwy. 604—Hwy. 128 (N. of Kenora)		42,118
599	Ignace—Tert. Road 808	60,919	1,169,573
600	Hwy. 71—Rainy River	411,647	323,562
601	Hwy. 17—Dryden	147,244	68,439
602	Fort Frances—Emo	14,750	126,122

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
603	Hwy. 17—Dyment		31,579
604	Hwy. 17—Kenora Airport		23,952
605	Hwy. 17—Eton—Rugby	10,663	88,778
607	Hwy. 69—(Big Wood—Hwy. 64)		56,536
607A	French River—Hwy. 607		11,891
608	Hwy. 61—Hwy. 595 (S. Gillies)		68,210
609	Hwy. 105—Clay Lake		70,584
610	Hwy. 67—Hwy. 101 (Hoyle)	48,327	146,059
611	Hwy. 602 (Sherwood) Northerly		120,216
612	Hwy. 103 (Mactier)—Hwy. 69		17,278
613	Hwy. 602—Lake Despair	55,435	111,508
614	Hwy. 17—Manitouwadge	28,425	218,092
615	Hwy. 17—Burditt Lake		62,817
616	Hwy. 101—Palomar		11,237
617	Hwy. 11 (Stratton)—Hwy. 600	4,185	129,296
618	Red Lake—Madsen	615,905	32,390
619	Hwy. 11 (Pinewood)—Hwy. 621		140,719
620	Hwy. 62—Hwy. 28 (Apsley)	19,978	164,452
620A	Hwy. 28—Hwy. 620		2,025
621	Hwy. 11—Lake of the Woods	3,539	137,604
622	Hwy. 11 (Atikokan) Northerly	49	107,420
623	Hwy. 11—Sapawe	65,442	17,763
624	Hwy. 11—Larder Lake		228,213
625	Caramat—Hwy. 11		106,222
626	Jct. Hwy. 17 to Marathon		14,992
627	Heron Bay—Hwy. 17	638,094	116,031
628	Red Rock—Hwys. 11 & 17		29,132
629	Timmins—Timmins Airport		41,357
630	Kiosk—Hwy. 17	24,421	137,210
631	Hwy. 17—Hwy. 11	25,661	897,741
632	Hwy. 118—Rosseau		46,833
633	Hwy. 11—Kawene		21,316
634	Smooth Rock Falls—Eraserdale	909,113	362,627
635	Hwy. 17—Ottawa River Bridge		11,891
636	Hwy. 11—Frederick House		21,464
637	Hwy. 69—Killarney	539,555	304,028
638	Dunns Valley—Echo Bay	1,060,844	173,089
639	Hwy. 108—Hwy. 546	1,207	183,753
640	Hwy. 571—Earlton Airport Entrance	860	13,031
641	Hwy. 17—Pellatt	12,904	39,184
642	Hwy. 599—Sioux Lookout		232,737
643	Hwy. 584—Twp. Road to Cavell		68,566
644	Hwy. 69 (Pte. Au Baril) Westerly		54,513
645	Hwy. 529—Bing Inlet	18,584	83,615
646	Pickle Crow—Central Patricia		191,754
647	Hwy. 17—Blue Lake Prov. Park		22,986
648	Dyno Mine—West Jct. Hwy. 121		149,060
649	Bobcaygeon—Hwy. 121		85,183
650	O.N.R. Right-of-way—Hwy. 12		38,425
651	Hwy. 101—Missanabie		215,718
652	Wade Lake—Kwy. 574	198,720	78,693
653	Portage Du Fonte Bridge Hwy. 17		120,304
654	Hwy. 11—Nipissing		105,978
655	Timmins—Ward Kidd Twp. Boundary	22,801	344,740
656	Hwy. 533 Northerly		19,213
657	Gold Pines—Hwy. 105		38,920
659	Hwy. 604—Hwy. 128		64,236
660	Bala—Hwy. 103		77,297
661	Gogama—Hwy. 144		19,511
663	Hwy. 11 (W. of Hearst) Northerly	8,212	22,719
664	Hudson—Hwy. 72		50,208
665	Hwy. 17—Richan		57,581
666	Kenora—Redditt	13,082	134,648
667	Hwy. 129—Sutton		143,711
	TOTAL SECONDARY HIGHWAYS	31,899,528	25,525,283

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
	TERTIARY ROADS		
800	Hwy. 11 & 17 N. of Whistle Lake		54,044
801	Hwy. 11—Namewanikan River		50,748
802	Hwy. 11—Burchell Lake		49,653
803	Hwy. 575—(Hwy. 101-3 mile South)		16,864
804	Hwy. 105 (lower Manitou Falls)		93,672
805	Hwy. 539A (River Valley)—Pond Lake		172,815
808	Hwy. 646—Otosilwin River		212,801
809	Hwy. 564—End of Highway		14,849
810	Hwy. 553—Richie Falls		238,664
811	Tertiary Road 800 northwesterly		347,739
812	Manitou Road-Hwy. 11 northerly	1,120,355	
	TOTAL TERTIARY ROADS	1,120,355	1,251,849
	ACCESS, INDUSTRIAL & ARTERIAL ROADS		
708	Marchington Lake Road	65,826	
709	Anaconda Road		14,579
751	Arterial Road—Jane ST. S'ly to S. Queens Drive	2,154,921	
758	N. of Hwy. 17 to Armstrong/Hurkett		81,670
760	Detour Lake Access Road	7,535,415	
771	Kodak Access Road	6,052,594	
784	Arterial Road—Lwarence Ave. S'ly to Trethewey Drive	364	
785	Bending Lake Access Road	2,603,932	
792	Hwy. 17—Dubreauilville Townsite		59,307
795	Sherman Mine Road		1,856
799	Caramat—Manitouwadge Road		108,150
	TOTAL ACCESS, INDUSTRIAL & ARTERIAL ROADS	18,413,052	265,562
	UNINCORPORATED TOWNSHIPS		
2	Indian Reserves	130,036	277,671
7	Special Settlers	238,779	203,224
9	Local Road Boards	1,698,852	4,976,965
99	Statute Labour Boards	70,152	175,994
	TOTAL UNINCORPORATED TOWNSHIPS	2,137,819	5,633,854
	SPECIAL PROGRAMS		
450	Other Ferry Services		2,581,106
735	Kitchener Waterloo Expressway	869,286	287,834
762	Welland Canal Tunnel		46,524
765	Townline Road Tunnel		21,778
797	Airstrip Development	2,820,224	1,893,165
952	Sidewalks	91,285	
7087	E.C. Row Expressway	6,316,910	136,382
7118	Brantford Expressway		20,841
7180	E. Metro Transportation Corridor	1,436,708	
8905	Lands & Buildings	2,188,471	3,596,122
8954	Weigh Scales	60,319	88,529
	Development Roads	6,284,601	1,836
	Connecting Links	16,186,703	1,518,478
	TOTAL SPECIAL PROGRAMS	36,254,507	10,192,595
	HIGHWAY TOTALS	351,246,675	148,676,067
	Sundry Unallocated, District Office Administration, Engineering Buildings, Inventory Charges, etc.	(81,857,790)	23,217,435
	TOTAL EXPENDITURE	**269,388,885**	**171,893,502**